The American Artisan
And Hardware Record

. 52. No. 2. CHICAGO, JULY 14, 1906. $2.00 Per Year.

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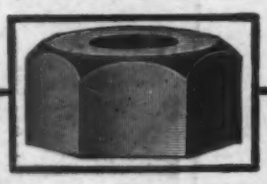
COLUMBUS BOLT WORKS,
COLUMBUS, OHIO.
Bolts, Rivets, Nuts, Washers, Carriage Forgings, Etc.
CATALOG AND PRICES ON APPLICATION.

The Sun Always Shines
Upon the house where
"American Seal" Elastic Oil Cement
as been used
engthens Weak Spots
Stops Leaks
THE PRICE IS RIGHT!
For bedding slate and tile Roofs — The best to be had
The Wm. Connors Paint Mfg. Company
Troy, N. Y.

TRYING to do business without advertising is like winking at a girl in the dark; you know what you are doing but nobody else does.

THE WIZARD
Adjustable Flexible Hanger.
The only Adjustable Hinge Hanger on market. Boiler Plate Steel Frame. Door Plate and Sliding Link Best Trade Malleable Iron.

STEEL ROLLER BEARINGS
Safety Door Hanger Co.
Ashland, Ohio. Hamilton, Ont.

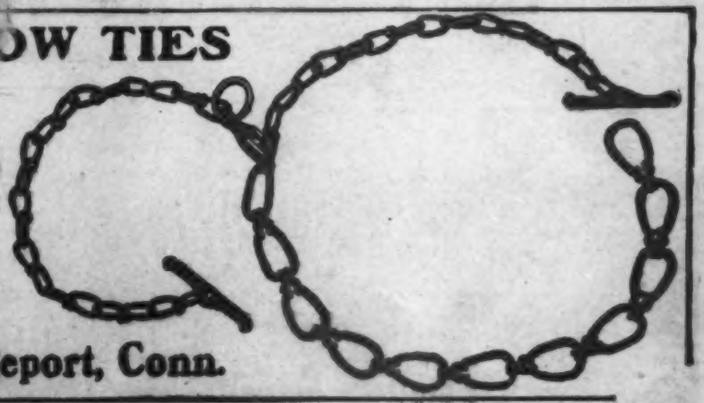


COLD PUNCHED
NUTS
HIGH GRADE
GOOD LOOKING
ACCURATE
SEMI-FINISHED
NUTS
Garland Nut & Rivet Co.
PITTSBURGH, PA.

BLACK DIAMOND FILES and RASPS

Twelve Medals Awarded at International Expositions
Copy of Catalogue will be sent free to any interested file user upon application.
G. & H. BARNETT COMPANY
Black Diamond File Works PHILADELPHIA

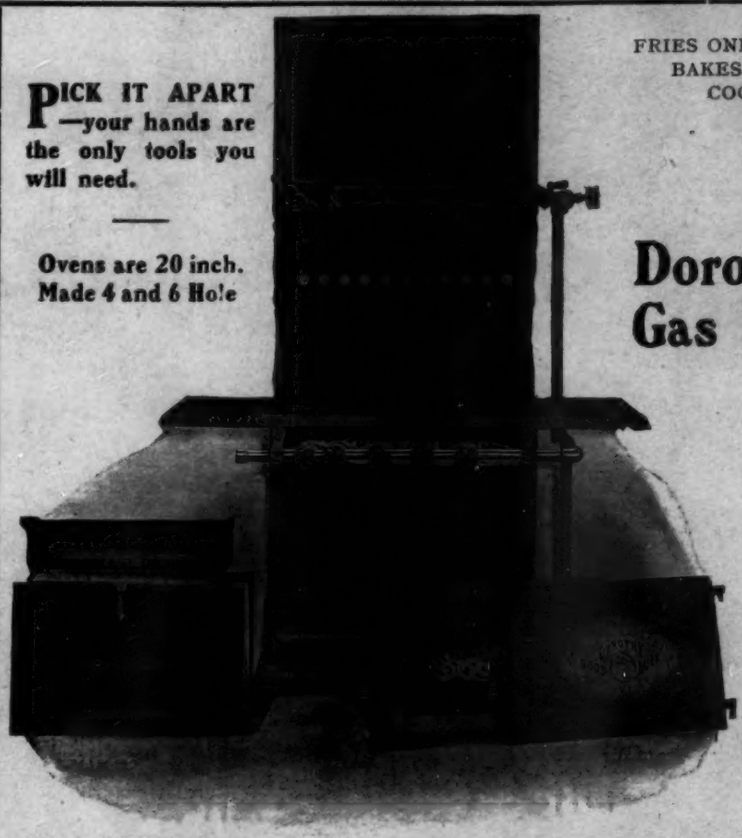
BROWN WELDLESS COW TIES
Twice as strong as welded chain.
A sample (full length) delivered for one cent.
Any Retail Dealer sending postal card request with name of Jobber secures sample prepaid.



Sole Manufacturers
The Bridgeport Chain Co., Bridgeport, Conn.

PICK IT APART—your hands are the only tools you will need.

Ovens are 20 inch.
Made 4 and 6 Hole



FRIES ONIONS WITHOUT ODOR.
BAKES GRIDDLE CAKES WITHOUT SMOKE.
COOKS SAUER KRAUT "IN SILENCE."
BOILS CABBAGE "IN CONFIDENCE."

The Flue System in a

Dorothy Good Luck Gas Range

is so complete and the construction so ingenious that all the disagreeable conditions, contingent upon the preparation of any food, are removed.

Some of the things it will do:

Bakes Griddle Cakes and Broil with Same Fire.
Bake Cakes, Pies and Bread and Broil " " "
Heats Water and Cooks " " "
Has Special Burners for Slow Cooking.
" " " " Fast "

"Draw Out" Ovens—Wash them at Sink.
"Lift Out" Burners— " " " "
Removable Broiler— " it " "
Flues as easily cleaned as a Lamp.

Prices Right. They Sell on Sight.
ASK US ABOUT THEM.

Pittsburgh Stove and Range Company, Pittsburgh, Pa.

Increase Your Profits!

The Kelsey is being specified for the finest City and Country Houses and for Churches and Schools

There's no good reason why you should continue selling hot air furnaces at cold air prices.

Instead of trying to be the low bidder on all the heating work in your locality—why not take the Exclusive Agency for the KELSEY Generator?

With the KELSEY you can go after a better class of heating work.

You can get better prices, and make a larger profit.

While the KELSEY Generator supplies warm air for heating purposes, it is entirely out of the "furnace class" because it supplies a larger volume of warm air—and this air is pure, not "baked" or scorched.

Now is a splendid time to investigate the KELSEY Agency—and enter the field this Season.

Shall we send you our Exclusive Agency Proposition?

28,000 Kelsey Generators Sold
800 Active Agencies

KELSEY HEATING CO., SYRACUSE, N. Y.

New York City: 156 FIFTH AVENUE
Philadelphia: BUILDERS' EXCHANGE, 24 So. 7th Street
Western Sales Agents: COOK & VAN EVERA CO. 38 East Lake St., CHICAGO

JAMES SMART MFG. CO., Brockville, Ontario, Sole Makers for Canada

Never Fail Heater

PATENTED

Perfection in Heater Construction

Never Fail Heater

Talking Points and Selling Points That are Clinchers

A hot blast system that feeds superheated air all around in a ring encircling the surface of the fire, accomplishing controllable and perfect combustion.

Its hot air ventiduct is of the most acceptable type, roomy, straight lined, and thoroughly ample and practical. It is the best working and most satisfactory ventiduct you will find anywhere. We also furnish the same heater without the ventiduct.

A SUPERIOR HEATER AND A PERFECT WORKER.

Ample Nickeling, Superb Ornamentation.

Burns coal, wood or lignite and is a winner that will win everywhere.

Sizes 115, 117, 119 and 123. Also in 117, 119 and 123 in sheet and a half heights.

The Channon-Emery Stove Co.

Quincy - - - - Illinois

Master Economy

(PATENTED)

When we built this stove we intended that it should be a wonderfully powerful heater, a perfect fire keeper and so perfectly controllable by its mechanical devices that its user could readily govern it according to his own inclination, and we succeeded so completely that the result is a surprise to everybody, ourselves included, for in points of heating power, nicety of regulation and all round reliability it has vastly exceeded our most sanguine expectations.

There are many original ideas embodied in **The Master Economy.** They are our ideas exclusively and we hold excellent patents that cover them absolutely, so completely indeed that competition is impossible.

Let Us Tell You Why This Stove Is So Popular Among Its Users

Consider how much more heat a stove radiates which has 4500 inches of radiating surface than an ordinary stove of the same size which has 2000 inches. Learn why the air is so intensely heated before being shot into the firepot through the turtle blast. There is a reason for the mica keeping itself clean. When the damper is pulled changing draft from direct to base heater why should your house cat come crawling out from under this stove? Is not the Base hot? Is there not room in your town for a good, live progressive aggressive dealer to make money with his stove line by handling exclusively one which will do all that the Master Economy will do? If there is, get the agency. Get it **now,** do not wait until your competitor has it and then regret having lost the opportunity. **Write to-day.**

Comstock-Castle Stove Co.

QUINCY, ILL.

WHITE'S STOVES & RANGES THE FUEL SAVERS

Won Gold Medal in St. Louis, 1904

WHITE'S STOVES & RANGES THE FUEL SAVERS

Thomas White Stove Company

QUINCY, ILLINOIS

Makers of the

It Burns the Smoke

It Heats the Floor

WHITE'S BEACON

the best smoke consuming stove on the market. Our sales on this remarkable stove are increasing rapidly. Secure the agency before it is too late.

Forty-fourth catalogue now ready.

"Quick Steel Heaters"

FOR COAL

Top Made of Steel—Bottom Made of Steel—Body Made of Steel

Light, Yet Strong

Saves Breakage

Lower Freight Bills

Neat, New and Attractive in Design

Sizes are Right

Prices Right

FOUR SIZES

Quick Steel Heaters are the newest specialty in the stove line.

All made of steel except linings and door frame.

They heat quicker and radiate faster than any other.

Our Indestructible Fire Pot is a Feature.

Air slots keep live fire at outside of fuel thus radiating the heat rapidly.

HAVE YOU SEEN OUR LINE OF

"AIR TIGHT WOOD HEATERS"

If Not Order Samples AT ONCE

New Catalogs Now Ready---Have You One?

RINGEN STOVE CO. Div.

ST. LOUIS, MISSOURI

SAPPHIRE

HARD COAL BASE BURNER.

A perfect Heater and a Parlor Beauty. Three sizes, 13, 14½ and 16-inch Fire Pots.

SULTAN STEEL RANGE

A beautiful and perfect Range. Made in all the usual Steel Range combinations. Large Ovens, Duplex Grate for hard or soft coal or wood. Four sizes.

SPECIAL STEEL RANGE

A superior Steel Range. Made in all the usual Steel Range combinations. Large Ovens, Duplex Grate for hard or soft coal or wood. Four sizes.

We Are Keeping Right Up to the Front

In Stove Architecture, Stove Ornamentation, And Decoration :: ::

Whatever is good, whatever is best is what we seek, what we get, and what we have to offer.

We have no chestnuts, no has beens, no failures. What we make can hardly be bettered in construction, design, ornamentation, oven sizes working conveniences or operating results.

We make Steel Ranges and Cooks in many patterns and they are all spendid ones.

We make Cast Ranges and Cooks; just about the best line that ever stood on a stove platform. You never saw a Hard Coal Base Burner that was handsomer, or better, or more convenient, or a better worker than what we have to show you.

If you want Oaks for your customers you want the handsomest, the best working ones, and the best heater you can find; we have them in many patterns.

We also make lots of cheap heaters and cooks, also many kinds of hot blasts, and they are the finest cheap stoves you ever saw.

OUR NEW CATALOGUE IS NOW READY, YOU OUGHT TO HAVE ONE. YOU GET IT FOR THE ASKING. :: :: :: :: ::

Sheridan Stove Mfg. Co.

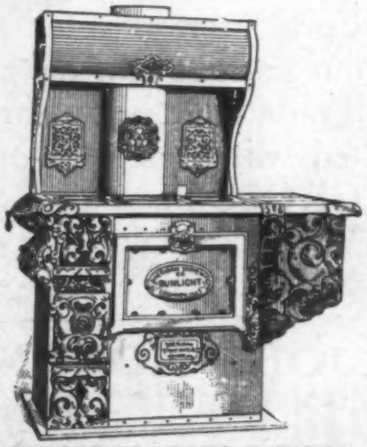
Quincy, Illinois

SUCCESS OAK

Sizes 261, 281, 301, 281½ and 301½. Showing the hot air ventiduct which extends from top of stove in a solid cast pipe to the top of fire pot, thence into the cast hump down through the back of base to an opening on the floor.

SUBSTITUTE OAK

A large cheap Oak. Quick seller, nickel ring, urn, name-plate, foot rail and screw dampers. Nos. 11, 13, 15, 18 and 20.



SUNLIGHT STEEL RANGE

A perfect medium priced Range. Made in all the usual Steel Range combinations and sizes. Duplex Grate for hard or soft coal or wood. Large Ovens. Four sizes.

ROYAL RED CROSS

In this beautiful stove, original in outline, in ornamentation and in flue construction, is seen the realization of all desires, surpassing every competitor.

One of its special features is the eclipse grate, and nothing of the kind has ever given better satisfaction, either as to its immediate convenience or as to the length of time for which it can be used.

RED CROSS STOVES

RED CROSS GARNET

Now, as always, in the lead. Our line of Base Burners for 1906-7 is most complete of any. Adapted for every requirement, to satisfy any size purse.

ROYAL RED CROSS, King of Them All

RED CROSS BEE with and without oven
RED CROSS GARNET with double heater
RED CROSS ENSIGN, a beauty
RED CROSS SUNBEAM, very attractive

Forty years devoted persistently to careful study of the interests of our patrons and the requirements of the Stove, Range and Furnace Trade have justly earned for us, we believe, the good repute connected with the Co-operative Foundry Company and the RED CROSS line.

We also make cast iron and steel Ranges, Cooks and Furnaces. Send for our Catalogues.

JOHN KONTNY, 65-67 North Desplaines Street
Chicago, Western Agent

CO-OPERATIVE FOUNDRY COMPANY

Founded in 1867 **ROCHESTER, N. Y.**

DON'T WONDER

why the heating system does not prove satisfactory. In most cases the furnace itself is at fault.

THE MUELLER

all cast double radiator furnace gives satisfaction in every instance. The reason is plain.—It is built on the proper plan, is properly proportioned, and above all things **POSSESSES A GREATER AMOUNT OF DIRECT HEATING SURFACE** than any other heater. It is **THE** Furnace for you to handle. Don't delay—write to-day for catalogue and prices.

L. J. MUELLER FURNACE CO., 191 Reed St., MILWAUKEE

ESTABLISHED 1857

Branch Offices and Warehouses at CHICAGO, KANSAS CITY, MINNEAPOLIS, SEATTLE

Foster's Prize Steel Range

THE LEADER OF THE SEASON

It embodies all late improvements looking to quality and efficiency, yet can be sold at comparatively low prices. It will pay the dealer to order a sample and consider agency.

WRITE FOR CATALOG

The FOSTER STOVE CO.
IRONTON, OHIO

MAGEE COTTAGE Smoke, Gas and Dust Tight Furnace

With Wrought or Cast Iron Radiators

CONSTRUCTION AND SPECIAL FEATURES

By the users of **MAGEE COTTAGE FURNACES** the satisfaction they give is never considered in detail,—for no detail can be criticised,—but simply as satisfaction complete and absolute. Yet this is so because every detail in design and construction has been perfected. There are few joints, and at these the castings are perfectly fitted. Fire Pot is in two pieces with straight sides, heavy and durable. The products of combustion make a complete circuit of Radiator before passing to smokepipe. Air circulates in direct contact with Fire Pot, Combustion Chamber, and in and about Radiator, becoming thoroughly heated before reaching Hot Air Pipes. Feed Section, Grate and Ash Pit operate with convenience, cleanliness, and are of great durability.

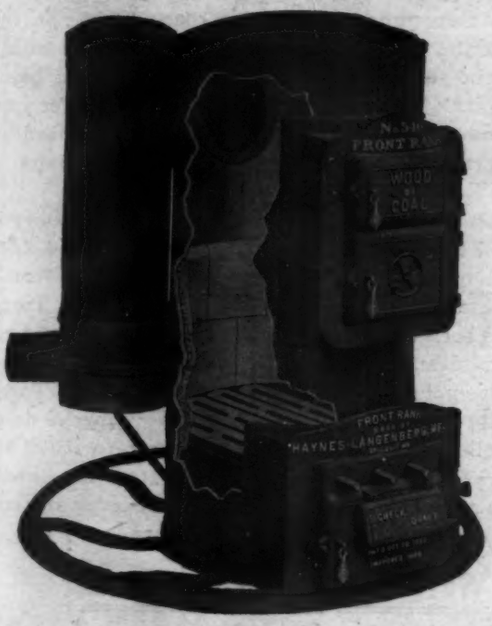
MADE IN SIX SIZES

MAGEE FURNACE CO.,
38 Union Street, BOSTON, MASS.

Prompt shipments can be made by the Western Agency

THE LOTT-BURTON COMPANY,
86 E. Lake Street, - CHICAGO

FRONT RANK STEEL FURNACES



are the peer of all Steel Heaters

NO DEALER SHOULD BE WITHOUT THEM

Front Rank Furnaces have been on the market for nearly twenty years, and at present, are being sold in every State in the Union where furnaces are used. **We guarantee them** to burn hard or soft coal, wood or coke, besides which **Any Hot-Water** combination can be used in the **Front Rank**

Write for Our 1906 Catalogue.

Handsomely illustrated—containing pertinent and pithy furnace facts.

HAYNES-LANGENBERG MFG. CO.

ST. LOUIS, MO.

RICHARDSON & BOYNTON CO.

Manufacturers

Warm Air Furnaces

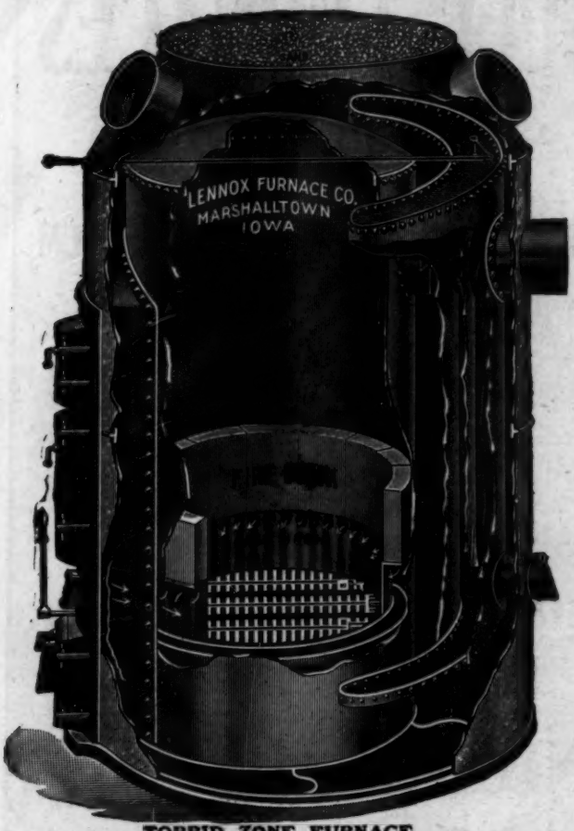
Hot Water and Steam Boilers

Tank and Laundry Heaters

SEND FOR LATEST CATALOGUE

NEW YORK CHICAGO BOSTON

BE MODERN—SELL STEEL FURNACES



TORRID ZONE FURNACE

They are easier to sell because the people want them. The people want them because **Lennox Torrid Zone** steel furnaces have demonstrated that the steel furnace is the only scientific and perfect furnace made. In the first place the fire, smoke and gases are confined within a gas tight and smoke tight steel dome riveted like a steam boiler. You no longer have a bon-fire under your house smoking thru packed joints which loosen or cracked fire pots which always come sooner or later to cast iron furnaces.

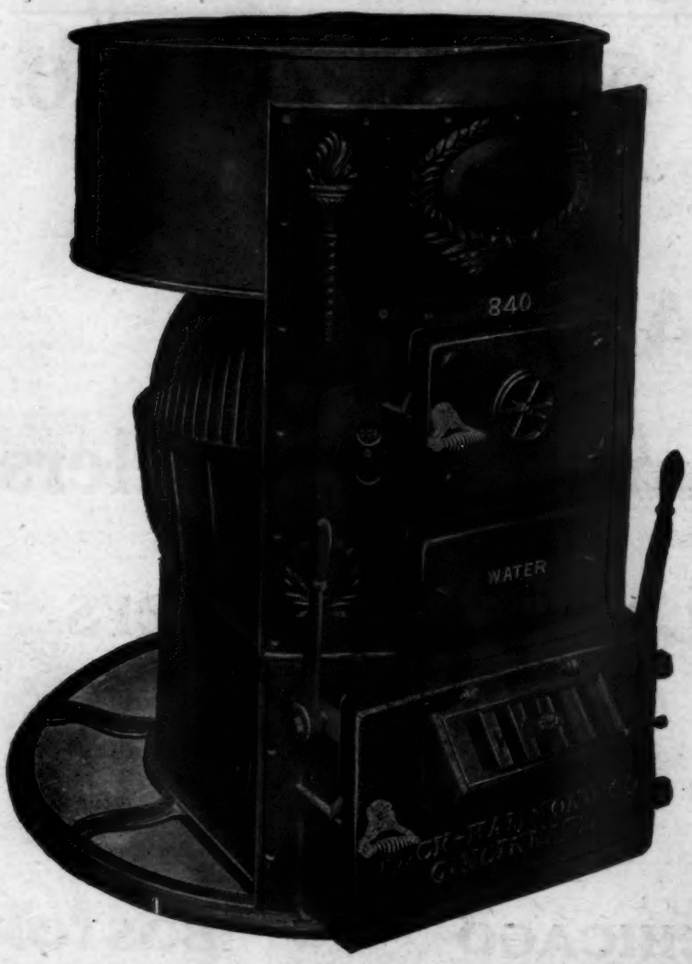
The Lennox Company now has the largest factory in the world for making steel furnaces. Its Torrid Zone furnace is the leading furnace sold in the Canadian Northwest where powerful heaters are needed. The Torrid Zone has been the pioneer among steel furnaces and has created the demand now felt everywhere for steel furnaces.

There is not a packed joint of any kind about a Torrid Zone. Its indirect radiator connected by a special dovetailed collar nearly doubles the heating capacity of the furnace—Torrid Zones are simple to operate and as easy to set as a stove. They do not get out of order and cost less for repairs than any other furnace made.

Write for 40-page Catalog

The Lennox Furnace Co.

Marshalltown, Iowa.



"Hammond" Dust Proof Furnace

With winged firepot, —the kind that lasts. Immense radiating surface; no dust nor smoke.

Healthful and Economical
What You Want and Need
Built on Modern Principles

The PECK-HAMMOND CO.

124 E. Pearl Street, CINCINNATI, OHIO

Boynton Warm Air Furnaces, Hot Water Heaters, Steam Boilers

are the result of 56 years practical experience.

For more than half a century the **BOYNTON** line has been the standard.

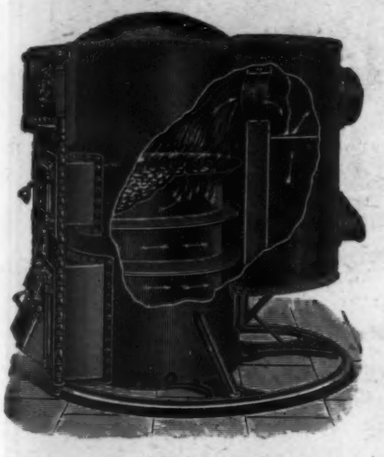
We make Furnaces of cast iron, or steel, or combination of both—portable or brick set—for hard coal, soft coal, wood lignite, or any fuel, and are adapted for any climate.

Our Steam and Hot Water Heaters Always Lead.

Write for our complete Catalogs.

THE BOYNTON FURNACE COMPANY,

147-149 Lake Street, CHICAGO
207-209 Water St., NEW YORK



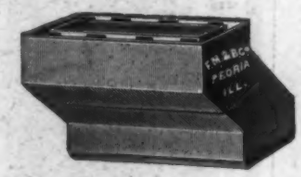
A GOOD THING

in Furnaces is the **"WEIR."** Good, because it is a gas and soot consuming furnace.
If you want an illustrated book describing **Real Furnaces,** send for the **Meyer** catalogue.

THIS IS ONE—We Have Five Styles, in Twenty-three Sizes.

MEYER FURNACE CO., PEORIA, ILL.

We call it the **Handy Furnace Pipe** because it is so **easily fitted.** The handy pipe is made in **scientific** patterns and of the **best material.** We make Square and Round Furnace Pipe, Elbows, Asbestos Pipes and Registers.



Large Stock Constantly on Hand. Prompt Deliveries.

F. MEYER & BROS. CO., Peoria. Ill.

BOOMER FURNACES

aren't like other Furnaces.

BOOMER Furnaces are heavy—but the weight is in the firepot and dome; they are powerful heaters—but easily controlled; they burn very little coal—but give maximum amount of heat; they will give your customers absolute satisfaction—but are sold at reasonable prices.

Why not sell the BOOMER Furnace?

Ask for our interesting catalogue and discounts—to-day.

We have an attractive proposition to offer live furnace dealers in unoccupied territory.

We also make Boomer Steel Ranges

The HESS-SNYDER COMPANY

Manufacturers Massillon, Ohio

HEAT LIGHT FOR THE HOME STORE HOTEL SCHOOL CHURCH OFFICE COLLEGE THEATRE FACTORY VILLAGE

INFORMATION FREE SEND FOR IT.

DETROIT HEATING AND LIGHTING CO. DETROIT MICH.

Independent Deflecting Wall Registers

Low in Price
Standard in size
Right!

Independent Register Co.
Cleveland, O.

CAN A STOVE DEALER MAKE ANY MONEY? HE CAN—SOME ARE. HERE'S HOW.

¶ This Champion Steel Range has **Patent Double Flue Hot Blast Draft,** saves fuel, heavy double steel body, removable reversible duplex grate, wood extension (if asked for), lift high closet door that *stays* open and encased reservoir, which is always clean and white and free from soot inside the casing.

Reservoir capacity, 7 gallons.
Oven No. 6894, 20½x18½x13½
Oven No. 6094, 20½x20½x13½

No. 6894—3 for $92.00
No. 6094—3 for $97.50
or
1 No. 6894 and 2 No. 6094 $95.00

Cash with order.
Either 8 or 9 covers (as ordered).
Freight prepaid to any point east of Miss. River.

Sell at $42.00 and $45.00, Profit 40%

THE CHAMPION STEEL RANGE CO.
CLEVELAND, OHIO

Send for Catalogue A

MONCRIEF
Warm Air Furnaces

Combine SIMPLICITY, DURABILITY, ECONOMY and CLEANLINESS IN USE

SPECIALTIES
- All Cast Iron
- Moncrief Duplex Grate
- Large Radiating Surface
- Top Return Flue
- Double Fire Pot
- Large Grate Surface

HENRY & SCHEIBLE CO.
6-8-10 Long Street, CLEVELAND, O.

Sales Agent—J. C. KIMMEL, 3314 East 15th Street, Kansas City, Missouri

DEAD RIGHT

During quiet moments, when you have an opportunity to think candidly, your better judgment always tells you that in the long run the best is always the cheapest, and that you cannot purchase something for nothing, and you are right, **DEAD RIGHT.** Don't lose your head when it comes to making a selection of Gas Stoves and Ranges, investigate carefully and choose wisely. For a postal, we will forward our illustrated catalog.

H. ADLER CO., Carnegie, Pa.

Western Office and Warehouse:
1225 W. 10th St., KANSAS CITY, MO.

Manufacturers of
ACME GAS APPLIANCES

The Gilt Edge Badger Furnace

is designed to give

Greatest Efficiency and Economy Possible

This is accomplished largely in giving it a high dome and a large radiating surface. Other furnaces of somewhat similar form have radiators not more than 16" in height; this furnace embodies one from 20" to 24". The combustion chamber is exceedingly large, as the body, containing the coal spout, is comparatively small. The products of combustion liberated are, therefore, compelled to ignite and burn before passing into the radiator, thus utilizing a great amount of heat that is otherwise wasted.

For Hard Coal Exclusively

Many other unique features will be discovered by a perusal of

our catalogue, which is sent free.

R. J. SCHWAB & SONS CO.
THE FURNACE MEN
MILWAUKEE :: :: :: :: WISCONSIN

High Merit based upon proper construction makes the **WISE** a favorite in the hearts of those who are well informed and know real excellence.

GET A CATALOGUE AND
LEARN MORE ABOUT IT

The Wise Furnace Co.

AKRON. OHIO

Skinner & Richards,
Columbus, O., write:

"Please omit our ad for tinner as we have secured a man. We find THE AMERICAN ARTISAN to be a first-class medium for advertising in this line."

Perfect Blast Device

Clinker Punch
Big Tubular Radiator
Secondary Radiator
Burns Soft Coal or Gas and can be changed quickly

THE BONNOT COMPANY, Canton, Ohio
Makers of GOOD Furnaces

THE QUESTION OF PROFIT

There is no surer way of increasing your profits than by using a furnace that saves coal for your customer.

You can be sure of this by using the celebrated "THATCHER" Tubular Furnace.

There is no question about it.

Its unique tubular heating surface is one of the greatest fuel saving features in modern furnace construction.

If you have a particular job now—let us quote you a price on a "Tubular" for it.

THATCHER FURNACE CO.,

110-112-114-116 BEEKMAN STREET

NEW YORK

THE NEW

LION FURNACE

Now Ready for the Trade

Can Use Hard or Soft Coal

Simple in Construction

and a Successful Heater.

Our Catalogue gives you full information.

Write for it TO-DAY

YOUNGSTOWN FURNACE & SUPPLY COMPANY

YOUNGSTOWN, OHIO

Address all western inquiries to our Western Distributors, COOK & VAN EVERA, 38-40 Lake St., Chicago, or to ROOD & McINTYRE, Kansas City, Mo., our Distributors in Southwest.

NATURAL GAS FURNACE

The "MANEST"

will heat any house, better and cheaper and with less labor than any other system.

Write for the agency in your locality.

***The* MANNEN & ESTERLY CO.**

Sole Manufacturers. CLEVELAND, O.

The "Manest" can also be attached to any Coal Furnace.

There Are No Better

FURNACES

Than those made by the

GRAFF FURNACE CO.

of New York City

In successful use for 25 Years.

Largest variety of styles and sizes.

For Western trade we have established a warehouse and sales agency at

Decatur, Ill.

C. M. BARNETT

SALES AGENT

REGISTERS : FACES . BORDERS

in every conceivable style, shape, design and material, made by

THE FERROSTEEL CO., Cleveland, Ohio

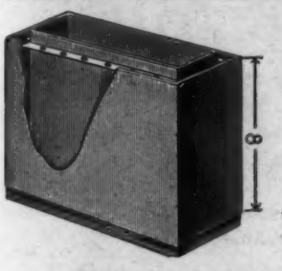
FERROSTEEL CAST—Mechanism and Finish Perfect, Designs Artistic and Attractive.

FERROSTEEL MODIFIED STEEL—Face Cast, Bottom Wrought Steel, Air Capacity Large, Designs all Styles.

FERROSTEEL WROUGHT STEEL—The most rigid made. Air Capacity greater than all Other Plain Lattice Wrought Steel Goods.

New Catalogue Just Out—FREE. Prices Rock Bottom. Our Record is Our ☞

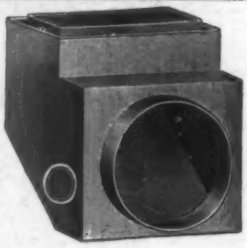
Persistent Superiority
Persistent Superiority
Persistent Superiority
Persistent Superiority
Persistent Superiority
Persistent Superiority



The Michigan Safety Furnace Pipe Company

Corner Brooklyn and Abbott Sts.

DETROIT, MICHIGAN

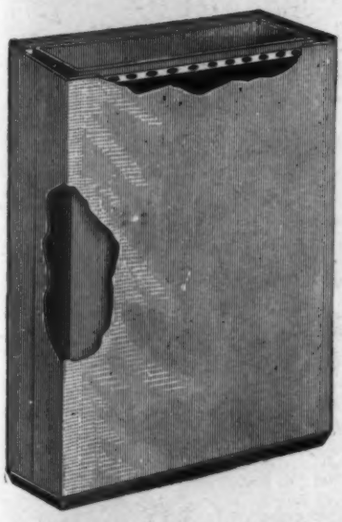


Manufacturers of Safety Wall Pipe, and Single Pipe and Fittings, in both tin and galvanized iron.

Send for our 1906 Catalogue. **Our new factory insures you prompt delivery.**

We belong to no combination. **Don't get our name confused with other manufacturers.**

GREEN FURNACE PIPE



Our Double and Single Furnace Pipe and Fittings are easily and quickly put together because they are perfectly made by skilled mechanics. We would suggest that you find out the freight rate on this class of goods from Des Moines to your station and compare it with that from any competing point. We have an immense stock and can always ship your orders promptly. We shall be glad to receive your request for our catalogue and discounts.

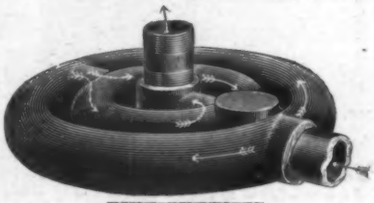
Green Foundry & Furnace Works

DES MOINES, IOWA

CHAMPION

Hot Water Combination Boilers

"They Fit Any Furnace"



RING SECTION.

(*Furnished tapped for return, as shown in cut, or tapped top and bottom if so ordered.*)

The **Champion** is made with base section and rings, and is thus adjustable, according to the amount of radiation to be used and the height of the furnace dome. The **sections** are connected with heavy threaded nipples, making all joints **absolutely tight.** The **Champion** does the work, no matter what kind of fuel is used. Each boiler is tested to 100 pounds hydraulic capacity before leaving factory and is **guaranteed** not to leak. Made in five sizes diameter. Write for price list.

FRANK D. STOLZ

Manufacturer

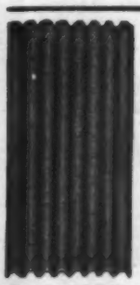
156 Webster Ave. CHICAGO

THERMOSTATS

SPRAGUE DAMPER & VALVE REGULATORS Non-Electric.

18 years in use. Thousands giving satisfaction; they are guaranteed; also Sprague Electrics, and automatic checks for Steam, Hot Water and Hot Air Heaters of all kinds.

HOWARD THERMO. CO., West, Oswego, N. Y.



Freight charges are sometimes heavy charges. We can save you money.

We are large manufacturers — small profits, many sales.

SYKES STEEL ROOFING CO.

Chicago, Ill. and Niles, Ohio.

Mfrs. Steel Roofing, Corrugated Iron, etc.

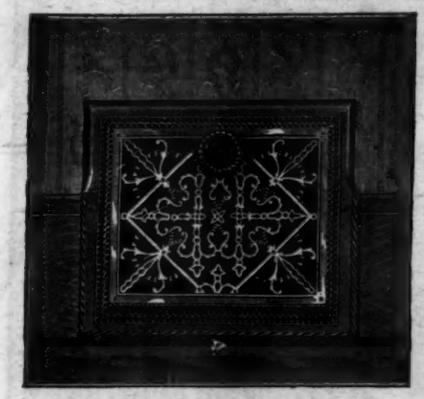
VACUUM STEAM HEATING (Morgan Patents)

The Marvelous Fuel Saver. Write at once for New Catalogues.

Kellogg-Mackay-Cameron Co. (Sole Owners)

Chicago Minneapolis Kansas City Seattle

THE AMERICAN ARTISAN Keeps You Posted.



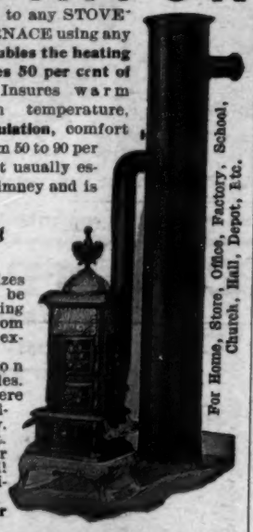
THE SCHWAB SIDE WALL REGISTER

THE SCHWAB SIDE WALL REGISTER AND REGISTER BOX, NEATEST IN DESIGN, NOISELESS IN OPERATION, SUBSTANTIAL IN CONSTRUCTION, A FACTOR IN MODERN METHODS OF HEATING RESIDENCES FULLY ILLUSTRATED IN OUR REGISTER CATALOGUE. SENT FREE ON APPLICATION.

R. J. SCHWAB & SONS CO., The Furnace Men **Milwaukee, Wis.**

STERLING
AIR HEATING
RADIATOR

Easily attached to any STOVE RANGE or FURNACE using any kind of fuel. **Doubles the heating capacity or saves 50 per cent of fuel expense.** Insures warm floors, uniform temperature, **continuous circulation,** comfort and health. From 50 to 90 per cent of the heat usually escapes up the chimney and is utterly lost.



The Sterling Radiator

saves and utilizes this heat. Can be used in adjoining room or in room above stove with excellent results.

Constructed on scientific principles. Does not interfere with draught. Always satisfactory. Nothing like it. Neat. No other radiator that will admit of comparison.

A money maker for dealers.

Write for full description and terms.

STERLING AIR RADIATOR CO.
617-60 Wabash Ave., Chicago, Ill.

The Auer

is the one register on the market that affords a foot rest and foot warmer. It also ventilates the room. It has adjustable valve and is the most ornamental register made. The Auer is guaranteed to be free from all defects in either material or workmanship.

Auer Register Co.
403 Long Avenue Cleveland, Ohio

Here's a Chance to Enjoy
A Summer Outing
3 DAYS LAKE TRIP $13
Chicago to Escanaba & Green Bay Ports & Return, Including Berth and Meals.
4 DAYS LAKE TRIP $17
Chicago to Mackinac Island and Return Including Berth and Meals.
MUSKEGON or GRAND HAVEN
AND RETURN FROM CHICAGO **$2.75**
MILWAUKEE
AND RETURN FROM CHICAGO **$1.50**
Write for folder and any particulars desired to

GOODRICH BOATS

R. C. Davis, G. P. A.
Docks, foot of Michigan Ave.
Chicago, Ill.

The advertising pages, which many persons seem to accept as a necessary evil accompanying the paper, are one of the greatest educational features of the trade journal. A broad education cannot be had without a good knowledge of the various kinds of apparatus used in power plants and it usually happens that the man who is best informed of what is to be had and where to get it quickly and cheaply generally makes a wise selection and his services are recognized in a substantial manner. The advertising pages serve as a silent, but persistent educator on the latest designs, constructions and adaptations of machinery of all kinds. The knowledge gained from the advertising pages, probably in the majority of cases, is acquired wholly unconsciously without the least mental exertion and wholly unaware that a valuable addition to one's general knowledge of engineering is being made. In this connection it should be remembered that manufacturers who present nothing but the more recent designs of very latest types are sure to be found.—Domestic Engineering.

DON'T FOR THE PAY

BLACK KID

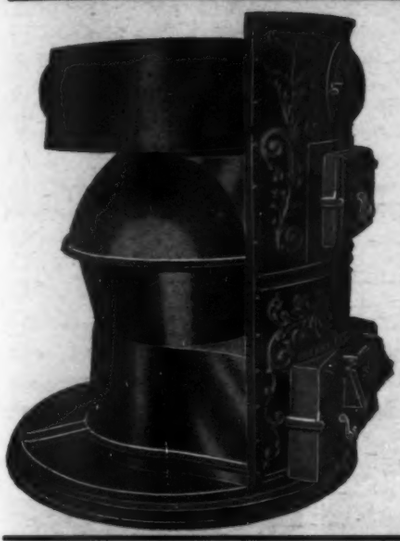
STOVE POLISH

IF NOT THE BEST YOU EVER USED

PUT UP IN 5-lb. CANS

NICKEL PLATE STOVE POLISH CO.
MANUFACTURERS, CHICAGO

PRICE, 65c PER CAN

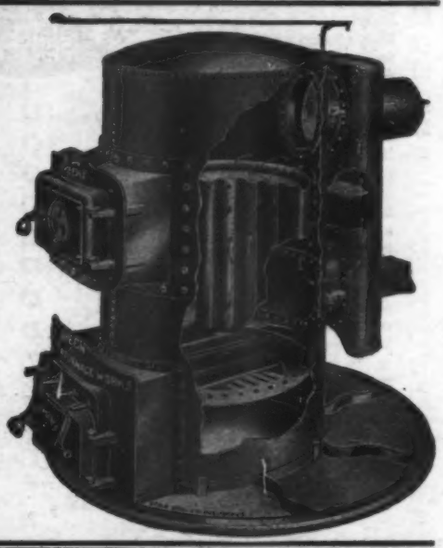


SPECIALTIES

are easy to sell and we manufacture a complete line. Six styles in all. Individual opinions differ as to the best construction for fire resistance, but no matter which style you sell, it is a Green Furnace and up to the Green Standard of material and workmanship. Our prices may surprise you.

Write us for Catalogue and Discount

GREEN FOUNDRY & FURNACE WORKS
DES MOINES, IOWA

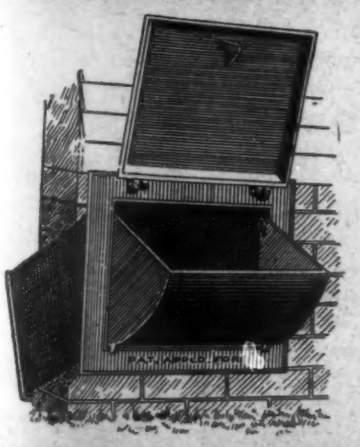


The Record of the

FLORAL CITY FURNACES

During the past ten years has never been equalled. They are, as a line, the BEST FITTED AND MOST POWERFUL, ECONOMICAL AND DURABLE FURNACES MADE, and we stand ready to prove this at any time by actual test. Perfect castings, skillful workmanship, careful supervision, these are the features that mark the superiority of the Floral City.

Monroe Foundry & Furnace Co., Monroe, Mich.

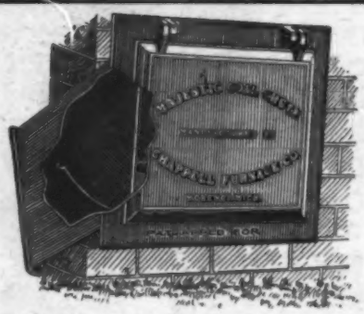


THE MAJESTIC

Coal, Wood or Vegetable

CHUTE

Fills a long felt want. Is burglar proof. Saves many broken windows. Is a splendid seller. Write for prices and secure agency at once.



Showing Door closed flush with the wall, and automatically locked on the inside.

THE CHAPPELL FURNACE CO., Morenci, Mich.

ROUND OAK

STANDARD OF AMERICA

The stove merchant located in a town where there is no agency for the sale of the **Famous Round Oak Heating Stove** has an opportunity to start a trade going that will be not only a **profitable, growing** one but a **credit** to him. The Round Oak never disappointed a user yet. Every stove sold creates a demand for more.
It is the best known; most popular, and has the largest sale of any stove known to the trade.
There are fifty-five hundred live agencies for Round Oaks scattered over this country from ocean to ocean
yet we are willing that there should be more and will cordially welcome all inquiries from stove merchants located in unoccupied territory.
Catalogue sent on request.

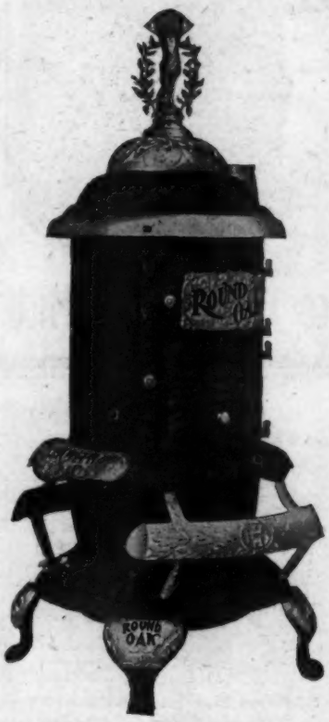
ESTATE OF

P.D.BECKWITH,

FRED E. LEE, Manager,

Dowagiac, Mich.

MAKERS OF GOOD GOODS ONLY.



"Doe-wah-jack, you spell your name with two hyphens, don't you?"
"Yes, Fritz."
"Well at home they think a man is aristocratic if he has only one. You must be away up, and belong to one of the first families in America."
"You're right, Fritz, one of the very first."

ESTABLISHED 1880.

THE AMERICAN ARTISAN & HARDWARE RECORD

Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

PUBLISHED EVERY SATURDAY.

TERMS OF SUBSCRIPTION IN THE UNITED STATES, THEIR POSSESSIONS AND CANADA, (Invariably in advance): ONE YEAR, POSTAGE PAID, $2.00. IN FOREIGN COUNTRIES EXCEPT CANADA, ONE YEAR, POSTAGE PAID, $4.00.

Address all Letters, communications, and remittances to

DANIEL STERN, PUBLISHER AND PROPRIETOR,

69 DEARBORN STREET, CHICAGO, ILL.

Entered at the Chicago Post Office as Second Class Matter.

THIS PAPER IS A MEMBER OF THE CHICAGO TRADE PRESS ASSOCIATION.

CHICAGO, JULY 14, 1906.

Notice is hereby given that Walter F. Wollensak, *alias* W. F. WALLACE, is no longer in the employ of The American Artisan, and is not authorized to receive or receipt for any money for this journal.

Trade Journal Publicity.

IT is generally conceded that trade journals are an excellent advertising medium. They supply an opportunity for manufacturers that should be grasped more firmly and used to better advantage. In every instance in which a retailer figures as a distributor, his trade journal can be used with profit. Shrewd retailers in every line of merchandizing realize the advantage of handling articles that are well advertised and it is good policy for a manufacturer to keep his trade informed as to the manner and the extent of exploiting accorded his product. The manufacturer should, however, remember the information the retailer most needs. Something should be said about the advertising literature that is furnished to the dealer and about any other advertising assistance the company gives. Moreover there are distinct features in every company's method of doing business which should be emphasized. It would be enforcing obvious to say that the manufacturer who offers the best advertising assistance to the retailer will get the most business. Trade journal publicity, well followed up, pays and pays handsomely.

Too Many Orders.

SOME evidence as to the busy conditions prevailing in American workshops and factories at the present time is contained in a report from Evansville that fully 5,000 men and boys could immediately secure work in the factories of that city. It is said that there is not a factory there which could not use more men at the present time and practically assure them steady work.

Much of this difficulty is perhaps due to the incapacity of those who present themselves for employment, and it may be that local conditions of an unusual nature are also somewhat responsible for the shortage of labor. It is much more likely, however, that a surplus of orders is responsible for the demand for laborers.

In this respect, Evansville is only a sample of hundreds of American manufacturing centers. So if foreign buyers of American goods sometimes experience difficulty in securing the prompt filling of their orders, they may know that the trouble at this end is not that the manufacturer is inattentive to their demands, but that he is simply incapacitated from "delivering the goods," because he cannot find men to make the goods fast enough.

Exporters Should Organize.

IT is in many ways unfortunate for the manufacturing exporters of the country that they have no recognized central organization that they can use as their mouthpiece in expressing their views on trade matters, and in urging business reforms and matters of legislation of interest to themselves. In England there is a central organization formed by numerous boards of trade and chambers of commerce throughout the country, and this body when it gets together gives its consideration to all manner of subjects in any way related to the business community. Its treatment of export problems is only a feature of its general discussions, but at any rate it is recognized as the institution which has authority in proposing legislation and bringing about movements for the betterment of business conditions.

In this country there is no one institution which occupies the same place in our commercial affairs. Privately promoted institutions whose only claim to general recognition is an impressive name, have failed to deceive the public for any length of time and no legitimately promoted association or trade organization has ever established itself wholly in the confidence of the nation as a body entitled to authority when discussing trade topics as the exponent of the entire country's interests.

Perhaps this is all because so many manufacturers are "too busy to export," but there are many who are not afflicted with this failing and any public-minded citizen who could bring these concerns together and unite their interests as exporters would doubtless earn for himself a lasting name as a public benefactor.

The Evolution of the Booklet.

THE evolution of the booklet as a trade getter for manufacturers has been slow but sure. If it did not jump into immediate favor it was not because there was any inherent or scientific defect in the idea, but rather because little care was taken in its preparation. Frequently crude in composition, badly printed and worse illustrated is it any wonder that it immediately went into the waste paper basket? To write a convincing and interesting booklet requires tact and literary discrimination. A booklet to be attractive should be written with insight and a command of language that makes any book popular. A booklet to be a success must persuade; its object being to effect a change

in the mental attitude of the person to whom it appeals. It is not sufficient to assert that this or that article is the best thing going, but every particular should be set forth clearly and graphically. Illustrating plays a great part in the success of a booklet, but it should not be overdone. It should have some bearing on the text, and it should not be overlooked. That what appeals to the artist or literary man may not appeal to the general public.

The advertiser should strive to get out a booklet of permanent rather than short-lived value. It should not be a symposium of technicals because technicals however good, are invariably too individualistic to be interesting to the individual. A booklet should seek to impress by arguments and illustrations of survey rather than by the reiteration of a few bald facts.

Many advertisers who are now unknown might today be famous had their booklets been readable or interesting.

Unjust Consular Criticism.

ATTENTION has recently been called by our consuls to manufacturers in some lines not giving as much notice as the consuls think they should to the export trade. So far as the export business is concerned there are two kinds of manufacturers, those who want to export and those who do not. And of those who are in the first-named class a further division can be made into those who know how to export properly and those who do not. Our consuls are criticising the whole irrespective of which class they belong to.

In order to be a successful exporter it is necessary that the business be studied thoroughly, and the exporter must realize what conditions must be met, and then adapt himself to those conditions. Those who are not successful are the ones who refuse to pack their good properly, make out their invoices regardless of instructions, and do not pay sufficient attention to their foreign customers' wishes.

It is gratifying to know that the number is very small that make this mistake, but it is against the whole exporters that some of our consuls have recently been complaining. There is room for improvement in the minority that fall short of what is expected of them, but it is wrong to condemn the entire American manufacturing industry because of the shortcomings of an insignificant few. If the consuls would occasionally vary their reports by telling of the achievements of the successful exporters who manage their foreign trade intelligently, they would do much toward refuting the accusation that they are unfair to manufacturers as a class.

RANDOM SKETCHES.

BY SIDNEY ARNOLD.

And so, after a fitful, fretful, wobbly and disgraceful sojourn here, the boycott, which proved itself a slimy, loathsome, treacherous failure among civilized American freemen, has finally "woke up" in a far-off corner of the world among a wretched people who, knowing no better, readily hearken to its teachings and adopt its methods. The boycott has found its level with the "Heathen Chinee."

What the Chinaman may do with it matters little. Let them keep it and play with it as long as they can stand it. Let them cut out our flour for awhile and go hungry for it. Let them boycott the best cotton products in the world and worry along for awhile with some poor substitute that they don't want. Let them boycott our steel rails and sit down and watch the little Japs gridiron the Chinese wildernesses with American rails and equipments. Let them monkey with their little old boycott for awhile until they see where they are going to "get off at;" until modern civilization reaches them and then, pass it downward to any other heathen community that will stand for it.

And while these "chinks" are stewing themselves into a frazzle over their little old ten-cent boycott, we will continue to sit around in our after hours, drinking their Oolong, Souchong and Ping Pong, and devouring their mysterious Chop Suey, unmindful as to whether China is on the map or in the discard.

* * *

When it frisks itself around among us the boycott never has a chance at winning. It may annoy some of us more or less at times, but whenever it whirrs its rattle and shows its poison fangs its finish is so clearly apparent as to nullify its terrorizing efforts. The boycotter is a quitter who merely aims to worry somebody, and we all know it.

To the educated, thinking American citizen the boycott is a cheap bunco affair; a predestined failure; a four-flush that is always "called" and always loses; and to the same minds the boycott instigator ranks points below the assassin among the scum of the earth in human guise. We have no place among us for him who seeks to destroy by stealth; whose moves are all under cover; whose acts cannot stand the light; who seeks to stab in the dark and get away unchallenged. The square mind in its normal attitude rejects and repudiates, and refuses to tolerate him, and although position, wealth and influence may at times seem to gain for him precarious, temporary footings here and there, his finish is in sight always and his ostracism among square men a foregone conclusion.

* * *

Speaking of four-flushes, let me tell you about a manufacturing four-flusher whose financial funeral, as it were, I attended just a little while ago. It happened in the form of a creditors' meeting, and as the debtor failed to "show up," the creditors had a good chance to do all the talking.

Well, I certainly learned something. In fine, I learned much about how a practically penniless individual with an active hot air attachment, had built up a decidedly pretentious business and gotten a whole snarl of wise business people interested in him financially to the extent of a whole lot of thousands of dollars and personally to an extent that left no chance of their ever forgetting him.

There was nothing left. The plant was gone, the goods were gone, the money was gone, and the manufacturer was gone. One ray of hope shone out amid the gloom, however, in an offer by one of the creditors who said, "Well, gentlemen, according to the statement we have heard, there is nothing left in the way of goods, chattels, money, or anything else for us to

act upon, and the debtor has 'flew the coop,' but if you will find this fellow, I will give fifty thousand dollars for his gall."

Here is a case in which the manufacturer had from the start played a good big four-flush, and when he was called he took to the woods and pulled the woods in after him.

* * *

I can stand for the four-flusher all right when the light is good and he has five regulation picture cards in his "mit," because I am then in a position where I am not expected to rely upon his honesty of purpose.

But when I am in an atmosphere of strict business affairs; in a presumed environment of squareness, of strict business ethics and all that sort of thing, and some big prosperous jobber whose curves are all readable to me, and whom I know will sell anything to anybody from a cap pistol to a six-year-old kid or a curling iron to the waiting lady at the quick lunch counter, to a sixty-dollar shot gun to the bartender over at the "dump" on the corner, or anything else to anybody else whom he is reasonably sure won't holler, and whose goods he admits were handled by every old catalogue house as long as they would "produce," and I find him all lit up with a halo of business integrity handing out hot air to a bunch of honest hardware dealers in a hardware dealers' convention, I begin to get nervous as to whether the Lord will ever forgive me if I don't give some of these good people a chance to "call" him.

* * *

I don't mean by this that a whole lot of your jobbers are four-flushers or hot air shooters, for I happen to know that most of them, in fact practically all of them, are on the square with the retail dealers, and that their rules and practices for the protection of their legitimate trade customers are at the present time drawn more nearly to a cast iron tightness than ever before in the history of the hardware trade. They could not be much more rigid, in fact, unless they put men at their doors armed with clubs to drive away everybody who failed to show up a diploma from some retail hardware academy.

You know how it is, of course. A very few shifty ones who are "onto their jobs" worked in among them can cast more suspicion upon all the rest than can be shaken off in a year with a notary public and a stack of bibles constantly on duty.

* * *

We have all met the man who mistakes perspiration for inspiration, the man who would rather look busy than be busy. This type of man is of the opinion that it is foolish to use his head to save his heels. So long as you make a big noise, do hand springs and sweat at your work, he is satisfied and does not give a rap for results. Noise is not necessarily work. We are living in an age of ball bearings. The man who gets there must secure a minimum of friction in order to get up a maximum speed. The man who is doing his very best work to-day may be relied upon to do even better to-morrow. Many a man has capacities but lacks the capacity necessary to discover them.

The phrase "do it now" is ubiquitous, but there are times and places when it appears ridiculous. Recently whirling along in a railroad train, gazing idly out of the window, I got a glimpse of a large poster bearing the picture of a little girl and the admonition "telephone your grocer for a can of Veribest meats. 'Do it now.'" It is well that the genius who concocted this had the presence of mind to add the last three words. Otherwise it would not have occurred to the writer to stop the train, rush to the nearest telephone booth, or no booth being in sight, to tap the telegraph wire and send the order to the grocer. Perhaps our friend had the wireless telegraph in mind. "Do it now" is all right in its place, but its appearance on billboards is rather absurd.

* * *

It is a fine thing to be an oracle to which an appeal is always made in all discussions. The man of facts waits his turn in grim silence, ever ready to bring out a "settler" in the form of a fact. Facts should always yield the place of honor in conversation to thoughts without facts, but the man of facts is sometimes tyrannical, and it is a pleasure to occasionally bring about his discomfiture.

I think it is Oliver Wendell Holmes who tells about the man in the boarding house who possessed a wonderful store house of facts. The talk ran about mountains. He knew the living facts of the Andes, the Appenines and the Appalachians; he did not seem familiar with Ben-Nevis, Ararat and various mountains that were mentioned. When a revolutionary anecdote came up he was familiar with the lives of the Adams, and gave details concerning Major Andre. Someone suggested a point of nature, and he expatiated at great length on the air bladder of fishes. Agriculture, he was very familiar with, but dropped out of the conversation when horticulture was mentioned. He spoke learnedly of anthracite coal, but did not discuss any of the other kinds.

There was something so odd about the limitations of his knowledge his interlocutor suddenly suspected what might be the meaning of it all. "Have you seen the American Encyclopedia?" said he. "I have," replied the man of facts. "I received an early copy." "How far does it go?" He turned red and answered, "To Araguay." You see it did not go so far as the Ararat, that is the reason he knew nothing about it, but he must have read all the rest straight through. If he can remember what is in that one volume until he has read those that are to come, he will possess a vast number of facts and yet will not necessarily be an educated man.

* * *

Carl Schurz, more than half a century ago in Faneuil Hall gave expression to the following, which is as true to-day as when he first uttered it:

"You may tell me that my views are visionary, that the destiny of this country is less exalted, that the American people are less great than I think they are or ought to be. I answer, Ideals are like stars; you will not succeed in touching them with your hands. But, like the seafaring man on the desert of waters, you choose them as your guides, and following them, you reach your destiny."

News Siftings

A. G. Brauer, the stove repair man of St. Louis, is sending out a neat little blotter. It is headed "Don't Think Us Cheeky," and has appropriately, as illustration, the face of a young man evidently suffering from a bad attack of toothache.

Many of the leading manufacturers report an unusual demand for all descriptions of stoves. Business in stoves is reaching large proportions in all sections of the central West and notwithstanding the fact that extensive supplies were carried over by the jobbers from last year, their stocks are being rapidly exhausted, compelling them to call upon the manufacturers for supplementary orders.

THE forty-fourth annual catalogue of the Thomas White Stove Company of Quincy, Illinois, has come to hand. From a mechanical point of view it is a beautiful piece of work, neat but not gaudy and if the apparel doth proclaim the man it should certainly act as a good salesman for this company's goods, which by the way, were awarded the gold medal at the St. Louis exposition. It contains nearly a hundred pages, every page being illustrated with cuts of the various kinds of stoves manufactured by the company. It contains directions for setting up and operating stoves, together with other information of value to the dealer. An examination of this catalogue will disclose the fact that the company has deviated from their usual plan in its arrangement. Instead of printing what has been known as a list price, they have omitted this feature altogether and instead they have printed on a separate folder which accompanies the catalogue, the net prices of each stove and range. The catalogue is one that should be in the hands of every dealer and the company will be glad to forward a copy to any one mentioning THE AMERICAN ARTISAN.

STOVE RATE CASE APPEALED BY ROADS.

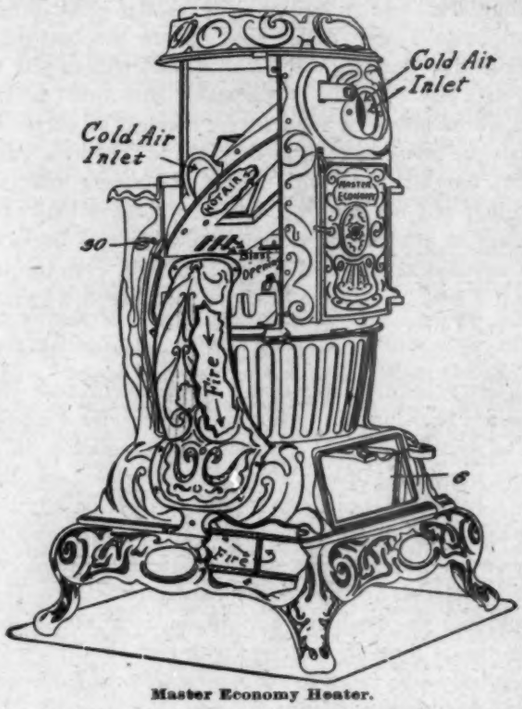
In the case of the Atkinson Stove Company against the Southern and other railroads to compel them to put into effect the rates on stoves prescribed in circular No. 309 of the Railroad Commission, a bill of exceptions was signed by Judge Pendleton in the civil division of the Superior Court of Georgia on Tuesday. The case will be appealed to the Supreme Court.

ROUND OAK STOVES.

No better evidence can be found of the wonderful progress made in the art of printing and engraving during the last ten years in connection with catalogues and brochures than the catalogue of the Round Oak stoves, issued by the Estate of P. D. Beckwith, Dowagiac, Michigan. Verily, good printed matter is of great assistance to the manufacturer selling the right kind of goods and is also an index to the standing of the house. Especially handsome and fetching is the new fifty-page catalogue issued by the above company in connection with the well-known Round Oak stoves, ranges and furnaces. Everything is in keeping, paper, printing and engraving. The cover is embossed and richly printed in colors with the head of our old friend, Doe-Wah-Jack in the center. It is nine by twelve inches in size, of extra heavy enameled paper and the type display, together with the vignetted half-tones are excellent in taste. It is not overcrowded, plenty of white space being left. It contains the fullest possible information in connection with the various types of Round Oak stoves, together with price list of the stoves, and also of the stove repairs. This catalogue in every respect shows the earmarks of a master hand, and every dealer should be in possession of a copy. Write for it, and mention THE AMERICAN ARTISAN.

THE MASTER ECONOMY HEATER.

When a stove proves an unqualified success from every point of view and accomplishes much more and behaves much better than its makers had expected of



Master Economy Heater.

it and is fully protected by letters patent it is a pretty good proposition for a stove dealer to tie up to. In the first place he knows he has a really good seller, and in the second place he can go right ahead and build up a growing and lasting trade upon it without fear of interference from competition. If he gets in right and holds the agency all right he can feel that he has something worth having and worth working for. This has proved to be the case with stove dealers who handled the Master Economy heater last year, and the same rule will apply to those who take it up at the present time.

In the peculiar construction of the Master Economy heater vastly increased fire contact or radiating surfaces are provided, the increase being something more than double that of ordinary construction of the same general shape and size.

This is accomplished to some extent by addition but chiefly by extending the line of fire travel into sections that are not calculated upon as heating sections in ordinary stove construction. There are numerous well

placed interior plates in this new construction that are constantly hot plates of the hottest kind and by clever devised entrances and exits for pure fresh air continuous currents are kept passing over highly heated iron and discharged into the room. It is gratifying to know that the heater has proved an excellent success to its designers and makers as well as to the many dealers who have taken it up.

The sectional cut shown herewith gives a fairly clear idea of the heater's peculiar construction and demonstrates a whole lot of the whys.

ANNUAL CATALOGUE OF SHERIDAN STOVE MFG. CO.

We have from the Sheridan Stove Manufacturing Co. of Quincy, Ill., an advance copy of their new catalogue, which is designated as No. 5, and is certainly a most creditable volume. In size it is 9x6 inches and contains 126 pages, exclusive of the cover. This is a catalogue that would seem to be destined to carry with it an important influence in the trade because it is an exceptionally excellent one.

First, the layout and arrangement is fine, opening with a good full-page illustration of the works at Quincy, then a page devoted to obverse and reverse half-tones of the gold medal awarded them at the Louisiana Purchase Exposition at St. Louis, together with a very nice description thereof. Then a good, well-written announcement to the trade. Then a page of terms and notices and a page of well arranged directions for setting up and operating stoves. Thus the preliminaries are in good shape, and then the catalogue begins in the order of steel ranges and cooks, to which forty-nine pages are devoted, the cuts being in good, big, distinct half-tones. Then follows forty pages of cast ranges and cooks, followed by base burners, oaks, box stoves, laundry stoves and an unusually long and good line of air tight heaters. From an artistic point of view the entire line as presented is highly commendable all through, most of the artistic features in the pattern work being of a very superior order of merit.

Mechanically the catalogue is a model. The paper is in heavy white glaze. The composition is practically faultless. The half-tone work, all of it, is the most perfect we have seen in stove work, and the presswork is superb indeed. It is rarely indeed that such perfect printing of angular dead blacks and dead whites as is to be found in stove work is to be found. The new catalogue should prove a business getter, because a swell line of goods, admirably balanced, is very nicely displayed within it.

THE ILINOY HEATER.

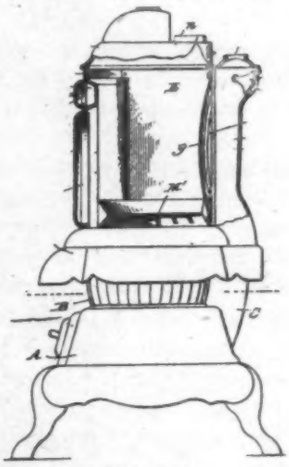
The Great Ilinoy heater, sold by the Quincy Stove Manufacturing Company, of Quincy, Illinois, gives satisfaction wherever used. There are twelve reasons advanced by the company why the dealer should sell this heater and these reasons are set forth in a pamphlet just issued by the company, which they will be glad to forward to anyone mentioning THE AMERICAN ARTISAN.

THE NEVER FAIL HEATER.

Mr. Joseph W. Emery, who will be recognized as an officer of the Channon-Emery Stove Co., of Quincy, has been granted U. S. letters patent for an original method of stove construction. The patent applies to the construction of the indirect form of the Never Fail Heater and relates particularly to the manner in which the ventiduct is made and let into place as here indicated in the claims allowed:

Claim.—1. In a stove, the combination with the base-section and fire-pot, of the body-section embodying an air-flue at the rear formed of separate castings connected at their edges, and sheet-metal side portions secured along their rear edges to the side edges of the flue-sections; substantially as described.

2. In a stove the combination with the base-section and fire-pot, of the body-section embodying an air-flue at the rear formed of separate castings connected at their edges, sheet-metal side portions having their rear edges clamped between



the flue-sections and a front section uniting the front edges of the side portions; substantially as described.

3. In a stove, the combination with the base-section and fire-pot of the body-section embodying an air-flue at the rear formed of separate castings connected at their edges, the inner casting being bowed inwardly over the fire-pot, sheet-metal side portions having their rear edges connected with the flue at the meeting edges of the castings, a cast front portion having door-openings, hot-blast flues at each side of said door-openings and a dampered entrance opening to said hot-blast flue; substantially as described.

The Heater has a number of new and excellent working and talking points, one of the chief ones being particularly attractive and effective.

It is a hollow cast ring encircling the stove body at the top of the fire pot and on line with the surface of the fire. This ring, which is perforated next to the fire all round. It is connected with a duct leading to an opening above the stove door where air is admitted and heated in transit is forced into the ring and in its superheated condition forced through the apertures in the ring upon the surface of the fire supplying the element for hot blast combustion. The stove works admirably and is considered a success.

The Commercial Intelligence Bureau, 49 East Cheap, London, E. C. England, wants to correspond with American manufacturers of general hardware, desirous of being represented by an agent traveling through India, Ceylon, Burma, China, Strait Settlements, Siam, Java and Japan.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 38 to 43 inclusive.

Articles of incorporation for the Ranchman Supply Company were filed June 22d at Helena, Montana. The company will handle hardware supplies.

F. A. Martin, proprietor of the Martin Hardware Store of Hamilton, Missouri, is having a new building erected to accommodate his increased trade.

The Asheville Hardware Company of Asheville, North Carolina, are enlarging their building. This is one indication of the growth of Western North Carolina.

The Ernst Hardware Company of Humboldt, Kansas, had a narrow escape from fire on July 7th. Only prompt measures saved the building from total destruction.

The work will be begun at once at Fort Smith on the new $75,000 building to be erected for the Atkinson Williams Hardware Company, of Fort Smith, Arkansas.

On September 1st, the Sherrod Hardware Company will consolidate with the newly organized Columbus Hardware Company. They will occupy a new building which when completed will be one of the handsomest structures in Columbus, Missouri.

The Bridgeport Hardware Manufacturing Company of Bridgeport, Connecticut, manufacturers of hardware and cutlery specialties, has increased its capital stock from $75,000 to $125,000. The new capital is to be devoted to the expansion of the business.

The firm of H. C. Westphal & Company has succeeded Mackenzie & Westphal, hardware merchants of Poynette, Wisconsin, as from February 3, 1906. They report good trade and as the crop outlook in their locality is excellent, they look forward to a continuance of good times.

The X-Ray Stove Polish Company of West Nutley, New Jersey, announces the purchase of the large brick factory of the Nichols Hat Works at West Nutley, and will remove their factory, which is at present located in Wellington, New York, to that address during the course of the present month.

The Connecticut Hardware Dealers' Association held its semi-annual meeting at the Pequot House, New London Harbor, on July 11th. The session was chiefly devoted to social exercises and an excellent dinner was served at the hotel. There was a brief business session with President George J. Bassett of New Haven in the chair.

The Executive Committee of the Wisconsin Retail Hardware Dealers' Association held its regular meeting at the Tremont Hotel in Oshkosh, last Friday. The principal object of the meeting was to arrange the preliminaries for the program of the next annual meeting of the association, which is to be held in Milwaukee, the first week in February.

The Oregon Implement & Hardware Dealers' Association has been organized in Portland, Oregon. The second Wednesday in February was chosen for the date of holding the annual conventions. The following are the officers: J. H. Simpson, Corvallias, president; H. J. Altnow, Woodburn, vice-president; H. J. Goff, Forest River, secretary.

"A Concise History of Lead Pencil Making" is the title of a speech delivered by John A. Walker, vice president and general manager of the Joseph Dixon Crucible Company, Jersey City, N. J., before the members of the "Boost Club," New York, May 10. A copy published in pamphlet form has just been received, and shows the subject to have been thoroughly and intelligently covered.

The latest thing in postal cards has reached us from the Grand Rapids Hand Screw Company, of Grand Rapids, Michigan. It is a very ingenious contrivance, consisting of two cards fastened together. On the back appears a picture of a police officer, and by moving the card, the eyes take on a very amusing appearance. Under the head is the statement: "We have been looking for you." The company means thereby that they are anxious to forward their catalogue No. 10, on hand screws, benches, etc., to all interested. Why not send for one, mentioning THE AMERICAN ARTISAN.

The demand for hardware in the San Francisco market shows continued increase, with indications pointing to a heavy trade for an indefinite period. The demand for tools and staple building hardware predominates at present and will continue to do so as long as building is confined to the temporary structures now going up like mushrooms. The coast inquiry for hardware at the mills and factories in the East is enormous and orders for San Francisco shipments have preference over those intended for other parts of the country. This, while causing no little inconvenience, is not given right to complain from other parts of the country as the East is doing all it can to help San Francisco to recover from her loss and misfortune.

MAKING SPECIALTIES IN MOUSE TRAP LINE.

The Sterling Specialty Company of Hartman, Illinois, is preparing to do a large amount of work in its new factory on Third avenue. Machinery has been made specially to stamp the parts and wind the springs for the mouse traps and other specialties are to be made by the company.

DEATH OF CASSIUS M. NOYES.

We regret to announce the death of Mr. Cassius M. Noyes, brother of Judge Noyes, who died on July 7th, at his home, 1830 Grand avenue, Milwaukee, Wisconsin, at the age of sixty-one years. He had been ailing for some time but his death came entirely unexpected. Mr. Noyes was born in McLean, New York, and went to Milwaukee about forty years ago, where he found employment with the John Pritzlan Hardware Company. Twenty years ago he went into business for himself, selling hardware specialties principally for Jones & Laughlin, Pittsburg, Pennsylvania. He is survived by a widow and two children.

THE "ABBOTT" DOCK CUTTER.

The Abbott dock cutter, made by the American Fork and Hoe Company of Cleveland, Ohio, is being thoroughly advertised to the trade, and should be a good line for jobbers to carry. The company will be glad to forward further particulars regarding this meritorious implement to anyone interested.

When writing, please mention THE AMERICAN ARTISAN.

NEW COMPANY WANTS CATALOGUES.

The Acme Hardware Specialty Company, of Freeport, Illinois, has been organized to manufacture specialties, and do the general jobbing work pertaining to the sheet metal painting. This company takes over the old firm of the Schofield Manufacturing Company. The officers of the company are: S. C. Schofield, president; Prof. Nagle, secretary and treasurer; Sam Wiltshire, superintendent. The company will be glad to receive catalogues and prices for material, etc., used in their line.

STEVENS FIRE ARMS.

The J. Stevens Arms & Tool Company of Chicopee Falls, Massachusetts, have issued a brochure exploiting the "Trio of Stevens' Successes". Stevens goods embody firearm virtues of a high order, and two of the tri are now ready for delivery, namely, Stevens "Little Scout" rifle number 4 and Stevens double-barrel hammerless number 325. The new number 80 gallery will be ready for delivery in September. These rifles are fully described and illustrated in the brochure, which will be mailed by the company on request to dealers mentioning THE AMERICAN ARTISAN.

MATCHLESS ROTARY WASHER.

The Richmond Cedar Works, of Richmond, Virginia, manufacturers of the Matchless rotary washer, claims for it that it drives away blue Monday and transforms the laundry room into the brightest spot on earth.

The Matchless.

The tubs are made of seasoned Southern heart cypress, have heavy flat steel hoops, machined roller bearing mechanism, and a very pleasing finish. It is claimed that on account of the smooth running, frictionless gearing, aided by the well-balanced fly-wheel, the week's wash can be finished in the shortest time, with the least work. The tub is water and steam tight, preventing the escape of foul odors and avoids sloppy floors. With the aid of the large fly-wheel, friction is reduced to a minimum, and the manufacturers claim that ribbons and rugs alike can be thoroughly washed without injury or wear.

This is only one of the many lines carried by this firm. They also manufacture the Majestic washing machine, Electric hoop tubs, painted cedar tubs, Keeler's ice cream freezers, etc. They will be pleased to forward catalogue of their complete line to those desiring same, and when writing kindly mention THE AMERICAN ARTISAN.

WANTS RABBIT FENCE.

Australian Federation Advertises for Bids for Netting Worth $100,000.

Wire netting manufacturers of this country will be interested in the news that comes from Australia that the government of one of the Australian states is calling for tenders to supply wire netting for rabbit fencing to the value of $100,000. It has decided to submit the business to public competition. The quotations relative to values are as follows:

42x1¼x17	$191.66	42x1½x17	$161.79
36x1¼x17	175.20	36x1 1-13x17	140.56
42x1½x18	152.37	42x1½x18	125.26
36x1¼x18	130.42	36x1½x18	107.06

It is not intended that these prices be considered as quotations for supplies, but merely as a guide to indicate the difference in value of the various grades. 42x1¼x17 stands at the head of the list but it is claimed to be the cheapest in the end.

South Australia adopts 36x1½x18. Naturally this demand in one direction for wire netting must tend to influence the market.

PORTABLE SAW.

An interesting novelty of recent make, says the New York Commercial, is a portable wood saw driven by a turbine and operated by compressed air. Air is admitted through a throttle and passes through a conduit cast in the frame on the back of the machine to a governor valve which is mounted on the hub of the turbine. It is operated by centrifugal weights, which move a collar laterally against spring resistance and operate the valve. Three ports discharge air against the buckets, of which there are 35. A pinion on the turbine shaft drives the saw through a train of gears, which reduces the speed from 8,000 revolutions per minute at the turbine to 5,000 revolutions per minute at the saw; or, by shifting an intermediate gear, the saw can be operated at the full speed of the turbine for light work. An adjustable grooved bearing permits raising or lowering the saw shaft so as to allow of the use of smaller or larger saws, this vertical adjustment being accomplished by a set screw. The machine sets on a base resembling a hand plane. The bottom of this base is polished, so that the machine is easily moved along the work. A brake at the side of the turbines is so arranged that when the air is shut off it is automatically released. One of the largest uses for this tool is trimming roofs of freight cars in car shops and for ripping wood generally. It is adapted to lumber up to 1½ inches or in some cases 2 inches thick. The air turbine is also used for operating an emery wheel, the wheel being placed on the shaft instead of the saw for surface grinding.

WHAT PEOPLE SAY.

Co-operation and Expansion, the interesting little publication of the Heath & Milligan Manufacturing Company, has the following on "What People Say":

That people who beat about the bush get none of the berries.

That between an ordinary cold and the grip the difference is the size of the doctor's bill.

That if people tell a man of his good traits it makes him conceited; if they tell him of his faults it makes him angry. So it doesn't do much good to talk to a man for his own good.

That old bachelors are not all devoid of gratitude. One in Ohio recently died and left all his money to a woman who refused to marry him when she was a girl.

That you should quit blaming other people for your trouble—if you were big enough you wouldn't have any.

That a wise man knows that his wife knows that he doesn't know so much.

That many a chronic sickness is only an habitual bid for more coddling.

That the richest harvest is a crop of reflected happiness.

That the success of a crooked stick and a bent pin only proves the possibilities of a good pole with a real fisherman behind it.

That nothing seems to please a loafer so much as his ability to bother a busy man.

That brevity may be the soul of wit, but when a man is short it's no joke.

That America's early settlers are those that pay up promptly the first of each month.

That two persons are not necessarily half witted because they have an understanding between them.

That nothing worries worry worse than work.

That the cheerful cannot help being charming.

GOOD SCORES WITH PETERS SHELLS.

The high amateur average at the New Jersey State Tournament June 5th, 6th and 7th, was won by Mr. F. W. Moffatt, shooting Peters' Premier factory loaded shells. Mr. Moffatt was also runner-up in the State Championship event.

The practice shoot of the Ohio National Guards at Port Clinton, Ohio, the first week in June, proved an unqualified success. Although it was early in the season and the range is a new one, the scores were well up, and in fact remarkably good. A number of the high men used Peters 30-caliber ammunition, Lieut. Benedict being high in the slow fire aggregate, and second in the grand aggregate. The scores indicate very strongly the superiority of Peters' ammunition over that of other makes, and also that Ohio will be well to the fore in the Sea Girt matches this year.

At the recent two days' Tournament given by the Boston Gun Club, Mr. Eugene Reed, the Mayor of Manchester, N. H., tied with one of the other contestants, and in shooting off to determine the score broke 25 straight; his opponents 20 out of 25. Mr. Reed uses Peters Target Factory Loaded Shells.

At Warm Springs, Ga., Tournament, June 12th and 13th, Mr. Harry Hall, representing Peters' Cartridge Co., broke 376 out of 400, an average of 94 per cent. Mr. Hall won the Dixie Handicap, scoring 47 out of 50 from the 20-yard mark, and also put to his credit a straight run of 122, no other shooter on the grounds coming anywhere near this record. Mr. Hall used Peters' Ideal and Premier Factory Loads.

At Watseka, Ill., June 26th, Mr. H. W. Cadwallader won high average, breaking 213 out of 220, and losing only two out of his last 150 targets. Mr. Cadwallader used Peters Factory Loaded Shells.

Mr. J. S. Day, representing Peters' Cartridge Co., shot Peters' Ideal Shells at Bethel, Ky., June 26th, and won high average, breaking 279 targets out of 300, an average of 93 per cent. High amateur average was won by Mr. S. S. Pinney of Rothwell, Ky., with 91 per cent.

At the North-American Trap Shooters' Tournament at Walla Walla, Washington, June 21st to June 23d, Mr. Holling tied for high average for the three days, using Peters' factory loaded shells.

At Brady, Tex., June 27th, 28th and 29th, high amateur average was won by Mr. M. E. Atchison of Giddings, with a score of 92 per cent for three days. Mr. Atchison shot the sliding handicap from 16 to 20 yards, and also won the second general average using Peters' factory loaded shells. Mr. L. I. Wade, one of the Texas representatives of the Peters Cartridge Co., won second professional average with 91½ per cent, using Peters Ideal loads.

RULE OR RUIN.

To THE AMERICAN ARTISAN:

I notice by some of the letters in this week's issue of your paper that some of the members are resigning from the Association rather than pay the assessments for lawyers and for fighting battles against our best friends.

What is the reason that a few of the officers have got to ruin their association, for they will ruin it if they have got to have their own way or none at all? It looks to me as though if they had the best interests of the members of the Association at heart they would not involve us in lawsuits which threaten the very foundation of our organization.

What is the reason for this dissatisfaction? Why cannot the Association live in peace and harmony and grow and prosper as it used to?

U. R. WRIGHT.

FRIENDLY TO THE DRUMMER.

To THE AMERICAN ARTISAN:

I read with interest the letter in last week's paper signed "M. L. C." and was much interested in what he writes about the traveling salesman.

I am always glad to have one of these drummers come into my store, when I am not too rushed with customers I give them all of the time I can. I find it profitable; they bring me news of the trade, keep me posted on the ups and downs of the market, when my competitor in a near-by town gets hold of a profitable specialty or a novelty they always put me next.

Lots of these drummers give me their information confidentially, and I suppose they give this same, or

similar, information to others and give it to them all in confidence—but what of it, I do not care to criticize. They do give me the information, and it is of value to me, and they usually are disinterested and impartial.

Most of the boys on the road who have been in to see me lately talk about the topic M. L. C. writes you about—the resignations of the members of the State Associations on account of the trouble and litigation the officers have gotten into.

I cannot understand why any member or officers of the hardware associations should quarrel with THE AMERICAN ARTISAN. You have always been our friend and you have fought our battles for us many, many years.

I did not go to the last convention, but I have been to many of them, and I always hear your paper referred to as our steadfast friend. It is too bad that you have got into a quarrel with some of our officers, and from what the boys on the road tell me you are in the right and they tell me that the truth is mighty and will prevail.

But why should the members all resign? Wouldn't it be cheaper and better and more satisfactory to stick to the cause? We know you and your paper have been our friends for a number of years and I, for one, feel like sticking to the "big show."

There must be some way of bringing our cranky officers to their senses. How can it be done, Mr. Editor? I believe in having prospering, healthy associations, with a change of officers rather than keeping the same officers in power year after year and having them be the whole Association.

I am hoping to hear soon that this fighting and going to law is quit, then there will be no assessment on the members and no resignations of the membership.

B. WEAR.

RETAIL HARDWARE DOINGS.

NEW FIRMS AND CORPORATIONS.

Sand Point, Idaho—G. F. Chamberlain.

Helena, Montana—Helena Hardware Company.

Govan, Washington—Hayden Lumber Company.

Renville, Minnesota—Heins & Company; incorporators are E. H., H. H. and C. A. Heinz and others.

McVille, North Dakota—O. S. Lee.

Britt, South Dakota—E. O. Jones and George McMichael.

Soldier, Idaho—W. Y. Perkins.

Holly, Michigan—John D. Oren.

Cowley, Wyoming—Cowley Hardware Company; capital stock $25,000.

Meridian, New York—J. S. Banker Hardware Company.

Marion, Indiana—Brown-Williams Company; capital stock $50,000.

Springfield, Ohio—Vulcan Hardware Company.

Rhinelander, Wisconsin—Nichols Hardware Company.

Morrill, Nebraska—E. M. Logan.

Monroe, Washington—Tedinga Hardware Company.

New York City, New York—Cook & Coleman; capital stock $15,000; incorporators are Wm. E. and Jennie L. Cook, Edgar H. and Lydia Coleman.

Chicago Heights, Illinois—W. O. McClanahan.

Windsor, New York—B. S. Anderson.

Albany, New York—Empire Furnace and Stove Repair Company; capital stock, $30,000; incorporators are Wm. Dewey, Frank C. Houghton and others.

Chicago, Illinois—Michaels Hardware Company; capital stock, $25,000; incorporators are Frank R. Michaels, Abram E. Mabie and Willard F. Conkey.

BUSINESS CHANGES.

Rockford, Illinois—P. A. Lundy succeeds M. A. Hulse.

Salem, Nebraska—E. S. Davis succeeds V. H. Shier.

Allegan, Michigan—Harry Lutis succeeds A. J. Colburn.

Bessemer, Alabama—Long-Lewis Hardware Company succeeds Lewis Hardware Company.

Shakopee, Minnesota—Levi B. Hanson succeeds G. S. Lander Hardware Co.

Victor, Iowa—Charles Ferguson succeeds Wilkins Hardware Company.

Plankinton, South Dakota—T. L. Gordon & Company succeeds Mike Gates.

Harley, South Dakota—Cairy & Berry succeed Bradberry Hardware Company.

Atkinson, Nebraska—J. J. Stillson succeeds the Atkinson Hardware Company.

Stuart, Nebraska—Gallegher Brothers succeed Reuben Taft.

Tacoma, Washington—Fuller-Knatworld Company succeed the Washington Hardware Company.

Montesano, Washington—McDowell & Phillips succeed L. Phillips.

Eugene, Washington—Dougan & Miller succeed Jennings & Edwards.

Tulsa, Indian Territory—W. O. McClure succeeds Graef-McClure Hardware Company.

Madrid, Iowa—Harry St. Helen succeeds J. W. Isaacson.

Lisbon, Iowa—Louis Hoeltje succeeds A. & G. Runkle.

Ivanhoe, Minnesota—Johnston & Johnston succeed Globe Hardware Company.

Albert Lea, Minnesota—Yost & Oppegaard succeed P. A. Peterson.

Mound Valley, Kansas—McGinnis & Jamieson succeed W. H. Humphrey.

Grand Forks, British Columbia, Canada—John Heron succeeds N. D. McNeil.

Diller, Nebraska—J. L. Henrichs succeeds Thomas Nelson.

Merna, Nebraska—Francis & Graham succeed Carey & Menary.

Thor, Iowa—Chris Peterson succeeds F. B. Jacobson.

Waverly, Kansas—B. J. Jackson succeeds C. J. Reed.

MISCELLANEOUS.

Mazomanie, Wisconsin—A. E. Diment; destroyed by fire.

Braddyville, Missouri—Fife & Company; destroyed by fire.

Peru, Iowa—W. P. Babery; destroyed by fire; loss $7,000; insurance $3,500.

Province City, Iowa—W. W. Kinser; addition.

Little Rock, Arkansas—Charlie Caldwell; new building.

Ossian, Indiana—Wilson N. Hoot, bankruptcy; liabilities $2,983; assets $3,221.

Mondovi, Wisconsin—Canar & Ward; burglarized.

Okemah, Indian Territory—John D. Richards; burglarized.

Gridley, California—C. Mayer; new building.

Caney, Kansas—Thomas Young; new building.

Troy, Illinois—J. C. Gebauer; alterations.

Los Angeles, California—G. F. Mondon; deceased.

Spokane, Washington—McGowan Brothers; destroyed by fire; loss $25,000; fully covered by insurance.

Nashua, Minnesota—G. H. Goedecke; burglarized; loss $75.

Finley, North Dakota—Long & Peterson; burglarized; loss $300.

Red Wing, Minnesota—Johns & Augustine; destroyed by fire.

Dazey, North Dakota—Andrew Thurston; bankruptcy.

Macon, Nebraska—W. J. Shepard & Company; destroyed by fire.

Inavale, Nebraska—Sawyer & Knight; destroyed by fire.

Morristown, Tennessee—C. E. Baylor & Company; addition.

Homestead, Pennsylvania—Homestead Hardware Company; destroyed by fire.

Hutchinson, Kansas—Colladay Hardware Company; new location.

Packwaukee, Wisconsin—A. Cole; destroyed by fire; loss, $400.

Heating and Ventilating

NEW DIRECTORATE.

At a recent meeting of the board of directors of the Peck-Hammond Company, heating and ventilating engineers, Cincinnati, the following officers were elected: Lawrence W. Hammond, president; William H. McKleroy, vice-president; John L. Eichberg, secretary.

GRAFF WARM AIR FURNACES.

The 1906 catalogue and price list of warm air furnaces manufactured by the Graff Furnace Company, 208 Water street, New York City, gives a very complete and full description of the many lines carried by this firm. It also contains useful and practical information for setting hot air furnaces and gives tables of estimated capacity of pipes and registers to aid furnace dealers in properly piping rooms to be heated.

One very popular line carried by this company is the Hero, tubular, steel plate radiator portable furnace. Concerning this, the manufacturers have the following to say: "Time brings many changes in methods and ideas, and the history of the furnace business is no exception. Not many years ago it was thought that no furnace could be first class unless made entirely of cast iron. The experience of the past fifteen years has demonstrated that one of the best features of some very successful and durable furnaces is the steel plate radiator. This style of the Hero furnace has been in constant use for eighteen years and no objectionable features have developed. When the radiator is properly constructed and the steel plate used is heavy and of good quality there is no more tendency to burn out or rust out than in any all-cast style. There was never any question as to the heating qualities of this style furnace, and the thousands of Hero furnaces now in use in all parts of the country speak volumes as to their merits in every particular. They are not made with steel radiators to cheapen the cost of manufacture, as the cost is the same as the all-cast style." It is made in five sizes, ranging from 32 inch to 50 inch casings. The patent revolving triangular grate bars used in the furnace is a feature to which special attention is called. The bars revolve either to the right or left, and the claim is made for them that they never become clogged or immovable; also that after running the fire for months the pot will be entirely free from clinkers, thus giving it a continuous maximum heating capacity.

Several other furnaces in addition to the Hero are illustrated and described in this catalogue, and the manufacturers will be pleased to forward same to any one interested. For the convenience of the Western trade they have established a warehouse at Decatur, Illinois, with C. M. Barnett as sales agent. If you write mentioning THE AMERICAN ARTISAN, catalogue and full particulars will gladly be sent.

THE "AJAX" WARM AIR FURNACE.

The "Ajax" warm air furnace, manufactured by the Co-Operative Foundry Company, of Rochester, New York, has from the first had a phenomenal success. A feature of the "Ajax" furnace which specially

recommends it is the radiator. This is made of either steel or cast iron, as desired. The catalogue fully describes the various features of the stove, gives dimensions and capacities, and other information of value to the dealer. The company, or their Chicago representative, Jno. Kontny, 65-67 North Desplaines street, Chicago, will be glad to forward a copy of this catalogue to anyone interested. When writing, please mention THE AMERICAN ARTISAN.

A REPLY TO SAM J. BECK.

To THE AMERICAN ARTISAN:

The flue referred to in THE AMERICAN ARTISAN of July 7th, has, or did have, an opening on the side near to where the dry closets have been. If this opening has not been closed, it may cause the trouble your correspondent is having, or it may be because the flue is so large that the small smoke pipe is unable to overcome the down pressure of cold air.

Last winter we had a difficulty of this kind. The flue was 24 by 24. Our smoke pipe entering it on the side was 9 inches. We stood a 12-inch pipe in the center of flue, ran it up 15 feet. It has been very satisfactory. The cowl he speaks of might help if the chimney is not high enough, but it probably is that your trouble is caused by the down pressure of cold air.

If he had submitted a drawing giving details of dimensions, it would have been easier to help him.

Yours,

CHARLES SMITH COMPANY.

Chicago, July 9, 1906.

AUER REGISTERS.

The Problem of Heating is the title of a meritorious booklet issued by the Auer Register Company of Cleveland, Ohio. The booklet describes the various styles of registers manufactured by this company which, they claim, embody the essential features which will the requirements combining ventilation with heating. The improved 1906 Auer register is handsome and practical and fills a long felt want. The company will be glad to forward a copy of the booklet to dealers who mention THE AMERICAN ARTISAN.

SEMI-ANNUAL MEETING OF THE AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS.

The American Society of Heating and Ventilating Engineers have issued invitations to its semi-annual meeting, to be held at the Auditorium Hotel, Chicago, on July 19 and 20. Sessions will be held at 10 a. m. and 2 p. m.

OFFICERS, 1906-1907.

President—John Gormly.
First Vice-President—C. B. J. Snyder.
Second Vice-President—T. J. Waters.
Secretary—Wm. M. Mackay.
Treasurer—U. G. Scollay.

Board of Governors—John Gormly, Chairman; C. B. J. Snyder, Vice-Chairman; T. J. Waters, Prof. R. C. Carpenter, James MacKay, F. K. Chew, B. F. Strangland, A. B. Franklin, Wm. M. Mackay, Secretary.

COMMITTEES, 1906-1907.

Compulsory Legislation—T. J. Waters, Chairman; H. D. Crane, Henry Adams, Andrew Harvey, W. H. Bryan.

Standards—Prof. Wm. Kent, Chairman; W. F. Wolfe, Prof. J. H. Kinealy, R. P. Bolton, E. F. Capron.

Tests—Prof. James D. Hoffman, Chairman; Wm. G. Snow, H. A. Loeb, S. G. Neiler, C. R. Bradbury.

PROGRAMME—THURSDAY, JULY 19th.

MORNING SESSION, 10 O'CLOCK.

Roll Call.

President's Address.

Paper—Heat Losses and Heat Transmission. By Walter Jones, Stourbridge, England (Member of the Society).

Discussion.

Topics for Discussion.

No. 1—The comparative relation between the completeness of air removal and the efficiency of steam radiators.

No. 2—The proper air space between the surfaces exposed in the heaters of blower systems.

No. 3—In blower systems of heating and ventilation, what are the maximum allowable velocities in the different parts of the system, and what limits the velocity and why is it limited?

No. 4—Summer tests of heating systems.

THURSDAY, JULY 19TH—AFTERNOON SESSION, 2 O'CLOCK.

Preliminary Reports of Special Committees.

Discussion.

The Application for a Charter for a Local Chapter of the Society.

Discussion.

Paper—The Elimination of Redundant Parts in the Forced Circulation of Hot Water. By A. H. Barker, Trowbridge, England (Non-member of the Society), presented by request.

Discussion.

Topics for Discussion.

No. 5—Natural versus mechanical and upward versus downward ventilation for rooms in schools and larger auditoriums.

No. 6—The advantages attending the use of steam and hot water in heating a number of buildings requiring 150 to 200 horsepower, from a central plant.

No. 7—The best method of calculating the sizes of the mains in a hot water heating plant.

No. 8—The effect of the size of the mains on the height of the water line in different parts of a gravity steam heating system.

No. 9—The relative economy in fuel of steam, vapor, vacuum and hot water heating for residences.

FRIDAY, JULY 20TH—MORNING SESSION, 10 O'CLOCK.

Paper—Notes on the Use of Feed Water Heaters in Connection With Heating Systems. By Wm. G. Snow (Member of the Society).

Discussion.

Paper—Fads and Fallacies in Hot Air Heating. By R. S. Thompson (Member of the Society).

Discussion.

Topics for Discussion.

No. 10—The relation of heat units per cubic foot and the cost of gas to its economical and possible use in heating water.

No. 11—In a hot air furnace burning 5 pounds of anthracite coal per square foot of grate per hour, what proportion of heating surface should be provided in relation to the grate surface to insure economy and efficiency?

No. 12—When the cubic contents and temperature of the air supply are known, what velocity should be considered when determining the size of the horizontal and vertical pipes and register outlets in a warm air heating system with outside air supply and when the air is circulated also the size of these air supply ducts and the velocity in them.

FRIDAY, JULY 20TH—AFTERNOON SESSION, 2 O'CLOCK.

Paper—Wall Radiators versus Long Pipe Coils. By J. A. Donnelly (Member of the Society).

Discussion.

Paper—An Improved Application of Hot Air Heating. By A. O. Jones (Member of the Society).

Discussion.

Topics for Discussion.

No. 13—The desirability of accumulating data as to the life of wrought iron and steel pipes in steam and hot water heating systems.

No. 14—Chimneys versus forced draft and their relative advantages.

No. 15—The durability of different kinds of nipples for connecting radiator sections relative to the material and the capacity to withstand shocks and strains, also the effect on boiler connections.

Entertainment.

The Illinois members have specially invited the members to bring their ladies with them. The ladies will be entertained with an automobile ride through the parks in the afternoon, accompanied by the Illinois ladies, and are invited to accompany the members to an informal banquet to be given at the Auditorium in the evening.

Any member desiring to visit any special point in Chicago, on request, will be accompanied by a Chicago member on notice to the Secretary.

MAGEE MANUAL.

A booklet containing information of great value to the trade is the Magee Manual. The third edition is now ready and is as usual a multum in parvo. The information on heating and ventilation, fuel and combustion, construction of buildings and tables of various kinds which the dealer most needs are invaluable, and we feel sure that this edition will meet with the same expressions of appreciation as have the previous issues. The company will be glad to forward a copy of this booklet to dealers who will mention THE AMERICAN ARTISAN when writing.

Tinshop

WELSH TIN-PLATE INDUSTRY.

London Commercial Intelligence, in a report on the tin plate industry in South Wales, says:

The tin plate seems to be going from bad to worse. American competition is being severely felt, and, though some of the Welsh makers are quoting undercost price to secure Canadian orders, they are being undersold to the extent of about 6d. per box, with the result that American deliveries into Canada are going up by leaps and bounds. In other markets, too, the Americans are entering into fierce competition with the Welsh makers, it being reported that the quantity of tin plates on which the United States government allowed drawback during the last fiscal year was 151,677,870 pounds, an aggregate which has only been beaten twice before.

APROPOS OF STEEL CEILINGS.

The St. Paul Roofing, Cornice and Ornament Company, of St. Paul, Minnesota, have issued a new catalogue entitled "Supplement to Steel Ceiling Catalogue O."

It is handsomely gotten up and deals with the various kinds of steel and copper-plated steel ceilings manufactured by this company. The catalogue is illustrated with photographs of ceilings installed in various parts of the country. The designs shown are extremely elegant and possess moreover the advantage of being fireproof. The popularity of steel ceilings is only a question of public knowledge of their merits.

The company will be pleased to send full particulars to all writing, mentioning THE AMERICAN ARTISAN.

GOOD ROOFING TIN.

Scott's extra coated roofing tin, manufactured by Follansbee Brothers Company, of Pittsburg, has been on the market for over twenty-one years and the demand is greater for it every year. The manufacturers have recently issued a neat folder giving particulars of their full line, and regarding roofing tin they have the following to say:

"There is a great deal of misconception generally, more than there should be, as to what makes a good roofing tin, too much attention being paid to the claimed weight of coating, or to highly colored descriptions of the black plate supposed to be used for a base. The coating must be right not only as regards the quantity, but also the quality, and the way it is applied. The coating weight seems to be urged frequently as the main, and, in many cases, the only influence, and the mere statement or misstatement of same, is often accepted without comparison with the standard products of experienced, well-known manufacturers who can be depended upon. The material used for a base is important, but it must be properly treated, or high-priced expensive stock will be but little better than the cheap article. Throughout the entire manufacture the niceties of each process mean much. The value of coating and base is greatly reduced if the heating, rolling, pickling, annealing and other important features are not given intelligent, experienced and constant attention. We make our roofing tin carefully, well, and by the best methods throughout; from the very commencement using particularly suitable raw materials and giving the very best treatment in each and every stage of the manufacturing processes, all being conducted in a properly known manner, proven correct by many years' practical experience."

The manufacturers will be pleased to send particulars and information concerning the many special brands they make. When writing kindly mention THE AMERICAN ARTISAN.

AN UNCOMMON BOOKLET.

The American Sheet and Tin Plate Company, of Pittsburgh, Pa., have recently put out an uncommonly handsome booklet entitled "From Underfoot to Overhead," telling of their goods, and containing some very valuable information for the use of their trade. The booklet is oblong in shape, 4½x7 inches, 64 pages and cover. The cover, which overhangs, is printed in three colors and gold from an original design, and the inside pages are very freely illustrated with most excellent vignetted half-tone engravings. The body of the work is of heavy, enameled, tinted paper printed in black and with decorative initials, etc., in Persian orange.

The booklet has been prepared with the object of giving a general idea of the many processes through which a piece of ore must pass before it becomes the base of a M. F. terne plate.

They emphasize the fact that statistics have been carefully omitted for the reason that they wish the reader to regard its perusal as a pastime and not a study. We do not know that we have ever read a more fascinating description of the progress of a piece of ore from the time it leaves the mine until as the finished article it becomes of the greatest commercial value. From the mine, the reader is taken on a whaleback through Lake Superior to one of the many unloading docks in the vicinity of Cleveland. Here powerful unloaders are set to work removing the ore, and when cars can be had the ore is emptied from the unloaders into them. From Cleveland the ore goes through Lake Erie to a blast furnace near Pittsburgh and there the actual work of manufacturing the M. F. terne plates commences.

The trip from Lake Erie to the blast furnace consumes several days. On its arrival it is taken to the blast furnace, placed in hoppers and loaded into charging buckets. A beautiful engraving shows a blast furnace at Duquesne mill which holds the world's record. The furnace is fired by a train of heaters and blowers which constantly drive a body of superheated air and flame into the ore chamber. We are shown the operation of "running the blast," and though the furnace is charged without intermission for twenty-four hours of every working day, the furnace is tapped at intervals of every four hours.

The heat quickly reduces the ore and other substances and as the molten iron is heavier, it seeks the

lowest level, while the cinder or slag floats upon the surface. It is an easy matter therefore to make an opening near the top of the reservoir and run the waste off into ladles, while lower down another is opened which allows the refined ore to pass into the runway leading to one of the several empty ladles. Each ladle has a capacity of 18,000 pounds, and when the last one is filled a shifting engine is brought up, coupled and the train starts for the weighing scales.

The reader pauses to examine a picture of the weighing process and then follows the metal to the mixer. The mixer plays two important parts in the process of steel making. It keeps the metal constantly disturbed, thus insuring a thorough mixing, and at the same time it is a storage room for the molten metal where it can be held until the converters are ready for it.

The mixer being hung upon an axis, can be raised and lowered at will. A beautiful half-tone engraving shows the process of charging the converters. An intense heat and draught is then forced through the metal and the operator, by watching the changes in the color of the flame, can accurately determine when a sufficient percentage of the sulphur and carbon gases have been blown off. This process changes the iron into steel and practically all the foreign particles which, until now, have resisted separation from the metal, are carried off. The contents of the converter is emptied into a ladle which has an outlet at the bottom to facilitate the operation of filling the ingot moulds. Each mould has a capacity of six thousand pounds, and for the first time since the ore entered the blast furnace, the metal is allowed to partially cool, and become rigidly set.

The ingot is carried to the roughing rolls, where it is given a sufficient number of passes through it and rolled to the proper width and thickness. While still hot it passes onto the bar mill and the bloom is rolled until it is about eight inches wide and many feet long. The long bars are taken to the sheet rolling mills where the final processes are carried out. Every process is fully illustrated and the reader puts the booklet down, feeling that the time devoted to its perusal has been pleasantly passed.

A handsomer or more sane and useful booklet has not come to our table for review in many a day and we tender the company our congratulations upon the production of such a fine piece of commercial literature.

We advise our readers to secure a copy, which the company will be glad to send if they mention THE AMERICAN ARTISAN.

ALUMINUM AS A PRESERVATIVE.

Our attention has been drawn to a remarkably useful preparation sold in the form of a solution which completely displaces galvanizing in its superiority as a preservative. Its advantage is that it can be used on any raw surface, whether it be glass, wood, iron, or steel, and therefore it is of exceptional value to shipbuilders and ship repairers. As a rust preventer it appears to us to be far superior to any other composition, or, we should say, solution, as it keeps bright and untarnishable, preventing any deterioration of the material it covers. A solution which will withstand 500 deg. F. of heat can be spread over a large surface and supersedes galvanizing, and yet can be applied by the ordinary paint brush, will, we should imagine, very quickly make a famous name for itself. Its title, "Aluminamel," describes its composition, it being really an aluminum enamel-paint. It differs, however, entirely from what we are commonly acquainted with as aluminum paint, which are, we believe, nearly all of foreign manufacture. Aluminamel is a British production, and is free from common and inflammable ingredients like benzoline or celluloid, which, being liable to spontaneous ignition, are practically useless for the purposes of shipbuilders. This British composition has been very thoroughly tested, and it has been found that owing to its properties it will withstand soda, soap, paraffin, benzine, and turpentine. Even a large degree of heat fails to discolor it. We are informed that extensive contracts are being entered into for the supply of the solution to foreign navies, and many of our leading shipbuilders already have it in constant use. For motor boats aluminamel is perhaps particularly adapted, it being the only product of its kind which will successfully resist the wear and tear and the heat of the radiators and engines. Then, for the exposed parts of ships' fittings it is both a handsome and permanent protector, as the base, being of pure aluminum, enables the enamels to retain their original luster. We have recently seen the effect of the solution on some ships' fittings, and noticed that, notwithstanding the extremely exposed position these occupied, no sign of deterioration or rust was anywhere detectable, although the composition had stood exposure for a considerable period. Aluminamel is made up in half-gallons and gallons (about 11 gallons going to the hundredweight), and is produced at a price easily competitive with other less pure solutions.

Conrad Reinbeck, Mary E. and Bertha C. Whittaker are the incorporators of the Royal Stamping Company of St. Louis, Missouri. The capital stock is $15,000. The company will manufacture and deal in stamped and pieced tinware.

The American Loktile Company of Alexandria, Virginia, has established a branch sales department at 155 East Lake street, Chicago, Illinois. The company's product is interlocking metal tiles of flexible or porcelain enamel finish. A. P. Durgin will be in charge of the Chicago office and will be pleased to forward further particulars to dealers mentioning THE AMERICAN ARTISAN.

THE WORLD'S IRON SUPPLY.

A recent article in the Scientific American on "The Impending Exhaustion of the World's Iron Supply" has brought to that journal the following answer from Theo. F. Van Wagenen, of Denver, Colorado:

"Allow me to inform those who are unnecessarily worrying themselves over this matter, that the already known iron deposits of Mexico, many of which are

close to the sea, are ample in themselves to supply the iron furnaces of the world for at least the next half century, at the present rate of consumption. Moreover, our neighbor's mineral resources are as yet scarcely looked over, vast areas being unknown in detail to white men. I have spent the bulk of the last twelve months traveling in Mexico, from the Rio Grande to the Isthmus of Tehuantepec, and in that time have seen enough of available deposits of iron of excellent quality to calm all fears as to a possible scarcity of cheap ores of the metal."

HANDY FURNACE PIPE.

F. Meyer & Bro. Company of Peoria, Illinois, have recently issued their catalogue No. 19, containing everything needed for setting hot air furnaces.

In their announcement to the trade they state that they have added to their facilities for the manufacture of furnace pipe and fittings of all descriptions, and greatly improved their patented Handy goods. With regard to the Handy furnace pipe the following notice is given: "The Handy Furnace pipe is made with special view to being safe, as it has a large, continuous space between the inner and outside pipe, letting a great amount of air pass between same, thus the outside pipe always remains cool, it being unnecessary to cover with asbestos or wire lath. With the Handy it is utterly impossible to obstruct the air circulation, as the air is discharged through the inside of the head. It is also economical, as it is very quickly put up, all the joints fitting perfectly."

The catalogue is very fully illustrated, showing the many different styles of pipe, fittings and adjustable joints carried. Much useful information to the trade is also given, such as circumference and area of circles, and weights of galvanized iron pipe per lineal foot. This catalogue will gladly be sent by writing F. Meyer & Bro. Company, 1311-1313 South Adams street, Peoria, Ill., and when writing kindly mention THE AMERICAN ARTISAN.

AMERICAN TRADE WITH JAPAN.

Trade of the United States with Japan is larger than with any other oriental country, and aggregated in 1905 $106,000,000. The exports to Japan have grown from a little more than $5,000,000 in the calendar year 1895 to over $55,000,000 in 1905, being more than ten times as great in 1905 as in 1895. The imports from Japan also show a material increase, having been $22,500,000 in 1895 and nearly $51,000,000 in 1905. The gain in exports to Japan, comparing 1905 with 1895 is not quite so rapid as in those to China, but the growth in imports from Japan is much more rapid than in those from China. In the period from 1895 to 1905 the exports to Japan increased $45,000,000 and those to China increased practically $55,000,000. During the same period imports from Japan increased $23,000,000, while those from China increased but about $6,000,000.

The growth in exports from the United States to Japan and China has been a remarkable feature in our export trade in the last decade. The increase in exports to Japan was in round terms $50,000,000, while during the same period the growth in exports to all South America was but $32,000,000, to all Africa but $10,000,000, to Oceanica, including Hawaii, $30,000,000, and to all Asia except Japan and China $13,000,000. Thus the growth in exports to Japan from 1895 to 1905 has been greater than that to South America, Africa, Oceanica or Asia exclusive of Japan and China, while the growth to Japan and China in combination has been greater than that to the remainder of Asia, plus Africa, South America and Oceanica.

The articles which make up the large and rapidly growing total of American exports to Japan are more widely diversified than in the trade with China. The chief article in the exports to Japan and their values in the fiscal year 1905 were raw cotton, practically $17,000,000; manufactures of iron and steel, about $10,000,000; flour, $5,000,000; leather, $5,000,000; mineral oil, nearly $3,000,000; provisions, including meat, butter, condensed milk and canned foods of various kinds, about $2,000,000; cotton cloths, a little over $1,000,000; copper, a little over $1,000,000, and breadstuffs other than flour, a little over $1,000,000.

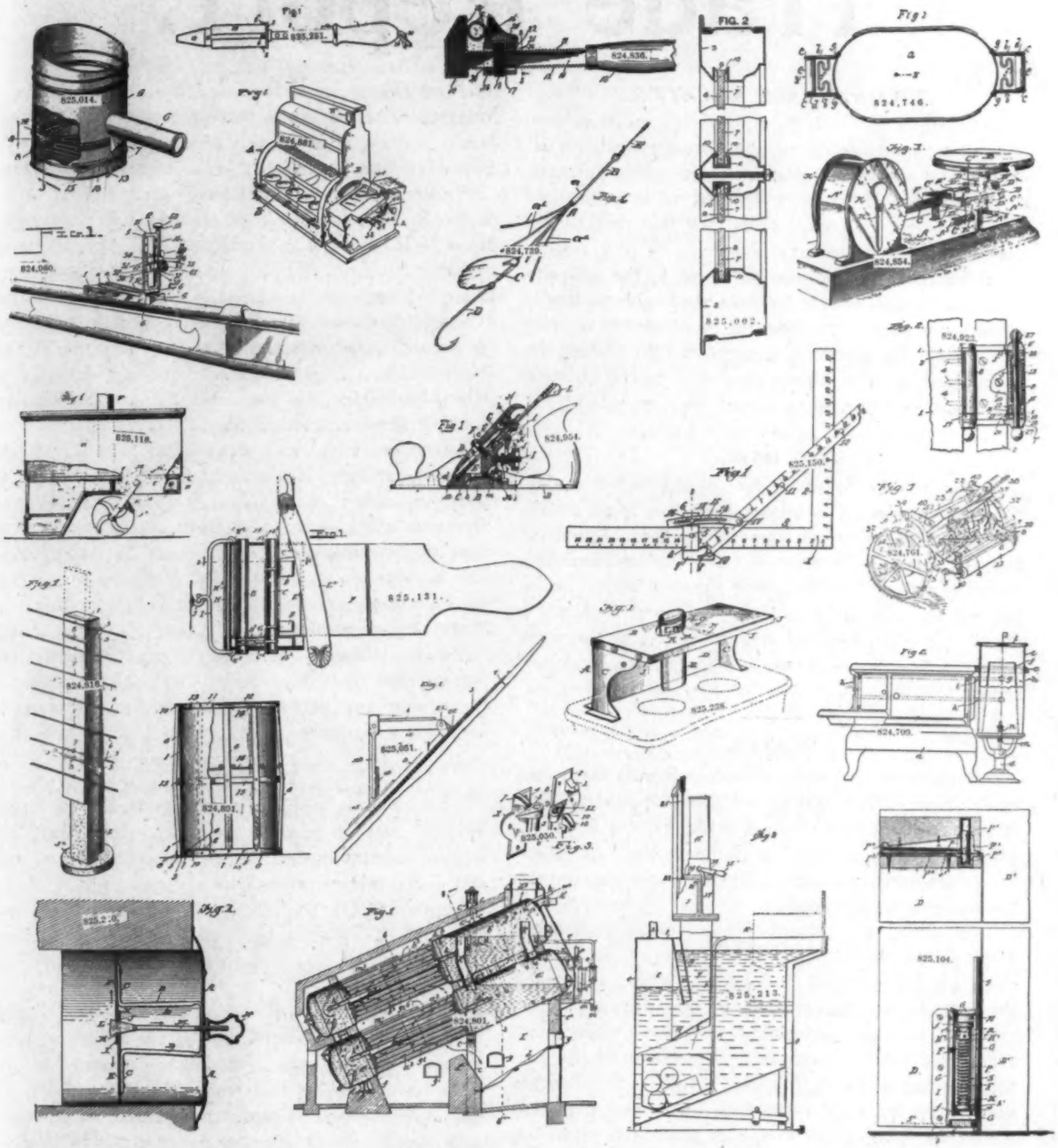
EXPANSION IN IRON AND STEEL.

A very interesting tale is told by the report of the iron and steel production of the United States for the calendar year 1905, just made public by General Manager Swank of the American Iron and Steel Association. That was the greatest year in those activities which the country has seen. In every item connected with the production and sale of iron and steel 1905 made a gain over any previous year, except in steel wire nail production and in the exportation of iron ore.

We are now making more pig iron than Great Britain and Germany combined, which are our nearest competitors. Our output was 23,000,000 tons for 1905, as compared with 16,500,000 tons in 1904. The gain this year will be comparatively small over last year's big output, but there will be a gain. Probably the 25,000,000 mark will be passed. We are now far ahead of Great Britain in coal production, and have been ahead since 1900, and our lead is lengthening. The extent of our coal and ore deposits makes our continued supremacy in iron and steel production safe. England's growth in these fields is now slow, and is likely to remain so. Germany is making a rapid increase, but she lacks the raw material to permit her ever to become a close rival of the United States in any field of iron or steel production.

Although the output of the country's furnaces and mills is at the highest figures ever touched, the orders which are ahead of all of them keep on increasing. Demand outruns supply, large as the latter element is. This is the principal reason why our imports of iron and steel are at large figures. We make more of these articles than any other two countries in the world, but we cannot make enough to meet the demand of our own people. For railway building and improvement and for the structural work in the big cities the demand for iron and steel is larger now than it ever was before. This is one of prosperity's signals which the country is very glad to greet.

NEW PATENTS.



824,739—Weedless Fishing-tackle. Herbert L. Phelps, Chicago, Ill. Filed Aug. 23, 1905. Serial No. 275,503.

824,746—Handle for Washboilers. Jacob Schaffer, New York, N. Y. Filed Aug. 11, 1905. Serial No. 273,776.

824,761—Lawn-mower. Melville W. Townsend, Martinsville, Ohio. Filed Jan. 12, 1906. Serial No. 295,799.

824,801—Boiler. Julius H. Meissner, Pittsburg, Pa. Filed Nov. 18, 1904. Serial No. 233,311.

824,816. Fence-post. John W. Rector, Savannah, N. Y. Filed Oct. 31, 1905. Serial No. 285,298.

824,836—Pipe-wrench. Harry S. West, Chicago, Ill. Filed Jan. 24, 1906. Serial No. 297,666.

824,854—Scale. John W. Ford, Alton, Ill., assignor of one-half to Frank R. Davis, Alton, Ill. Filed May 27, 1905. Serial No. 262,632.

824,881—Cash-register. Francis C. Osborn, Detroit, Mich., assignor by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a corporation of Ohio (incorporated in 1906). Filed Sept. 11, 1899. Serial No. 730,133.

824,891—Ash and Garbage Can. Casper Van Hoesen, New York, N. Y. Filed June 16, 1905. Serial No. 265,545.

824,923—Spring-hinge. Albert Falkenrath, Racine, Wis. Filed July 31, 1905. Serial No. 272,026.

824,954—Plane. John H. Shaw, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a corporation of Connecticut. Filed Apr. 17, 1903. Serial No. 153,092.

825,002—Fireproof Window. William H. Mullins and Will C. Hare, Salem, Ohio. Filed Dec. 28, 1904. Serial No. 238,625.

825,014—Sifter. Walter N. Treleaven, Chicago, Ill., assignor to Ideal Sifter Company, Chicago, Ill., a corporation of Illinois. Filed Feb. 27, 1906. Serial No. 303,180.

825,050—Hinge. Joseph H. Hammer, Sunbury, Pa., assignor of one-half to T. W. Saxton, Sunbury, Pa. Filed Nov. 23, 1905. Serial No. 288,675.

821,051—Roofing-bracket. Alonzo P. Henderson, Hanover, Mass. Filed Mar. 2, 1905. Renewed May 31, 1906. Serial No. 319,432.

825,131—Razor-stropping Machine. Everett G. Kaufman, Yonkers, N. Y., assignor, by direct and mesne assignments, of four-twelfths to John H. Clauss, Toledo, Ohio; three-twelfths to Ulysses J. Ulery, Yonkers, N. Y., and two-twelfths to Henry Clauss, Fremont, Ohio. Filed Oct. 2, 1905. Serial No. 280,992.

825,150—Attachment for Carpenters' Squares. Robert McCartney, Ottumwa, Iowa. Filed Jan. 18, 1905. Serial No. 241,685.

821,104—Spring-hinge. Emil Bommer, New York, N. Y. Filed July 1, 1905. Serial No. 267,872.

824,709—Water-heater. John Demarest, Binghamton, N. Y. Filed Aug. 19, 1905. Serial No. 274,919.

Trade Report.

THE HARDWARE SITUATION.

The manner in which the trade keeps up its volume of business notwithstanding the Summer, with its vacations and other incidental interruptions to business, is the subject of frequent remark. The volume of business is not only exceptional for this time of the year, but would be a large business for any season. Many manufacturers are embarrassed by the difficulty in obtaining steel which the mills are unable to supply in sufficient quantity to meet the requirements of their customers. Enterprise in general certainly continues to manifest itself in liberal expenditures and building in general continues on an almost unprecedented scale.

PIG IRON.

Strength is the dominant note of the market to-day. Standard grades of Southern irons are firmly established on the basis of $13.50 and Northern Brands at $18.50 Chicago. Substantially two hundred and fifty thousand tons of Southern iron changed hands during the buying movement in June. Current demand is mostly for small lots, the largest inquiry of the week being for five thousand tons of Basic from a local consumer.

PLATES.

Specifications for sheared and universal plates are quite active. New tonnage is also of good proportions. Demand from store is brisk, jobbers finding it difficult to keep on hand a complete line of sizes. Prices are without change, mill shipments, Chicago delivery, being as follows:

Tank steel, ¼-inch and heavier, up to 100 inches wide, 1.76½c base; flange steel, 1.86½c base; marine steel, 1.96½c base; all full extras. Plates 3-16 inch thick, $2 extra; gauges, 7 to 8, $3 extra; No. 9, $5 extra. Less than carload lots, $5 extra. We quote from local stocks; tank steel ¼ inch and heavier, up to 72 inches wide, 2c to 2.10c; 72 inches to 96 inches wide, 2.10c to 2.20c; 3-16 inch up to and including 60 inches wide, 2.10c to 2.20c; 3-16 inch 72 inches wide, 2.35c to 2.45c; No. 8, up to 60 inches wide, 2.15c to 2.25c; flange steel, 25c extra; heads, 25c extra.

OLD MATERIAL.

No improvement is noted in the local market. Demand is light and prices are soft. Western consumers generally are well covered for some months ahead, especially bar iron mills and open-hearth plants, and attractive prices are required to interest these consumers. Railroad offerings are heavy, the two most important lists being those of the Santa Fe for 3,200 tons, and the B. & O. for about 1,500 tons. We quote as follows, gross tons being mentioned in the first paragraph:

Old steel rails (4 feet and over)	$15.50@16.00
Old steel rails (less than 4 feet)	14.00@14.50
Old car wheels	18.00@18.25
Old iron rails	20.50@21.00
Relaying rails, subject to inspection	27.00@27.50
Heavy melting steel	13.00@13.50
Mixed country steel	11.00@11.50

We quote net tons as follows:

No. 1 R. R. wrought	$13.25@13.50
No. 2 R. R. wrought	12.25@12.50
Shafting	15.75@16.00
Dealers' forge, No. 1	11.25@11.50
Wrought pipes and flues	9.25@ 9.50
No. 1 cast, 150 pounds and less	13.00@13.50
No. 1 mill	8.25@ 8.50
Mixed busheling (No. 1 and No. 2)	8.50@ 9.00
Country sheet	7.25@ 7.50
No. 1 boilers' cut	9.25@ 9.50
Boiler punchings	11.00@11.50
Iron car axles	22.50@23.00
Steel car axles	17.50@18.00
Iron axle turnings	9.25@ 9.50
Cast borings	7.00@ 7.50
Mixed borings, etc.	7.00@ 7.50
Machine shop turnings	8.75@ 9.00
Railroad malleable	12.50@13.00
Agricultural malleable	12.50@13.00
Stove plate and light cast scrap	10.50@11.00
Old iron splice bars	16.00@16.50

TIN PLATE.

There will probably be no change in this list of union and non-union mills for the coming year. The leading interest having signed the amalgamated scale and independent interests as soon as they are ready to resume will do the same. We quote $3.75 per base box f. o. b. Pittsburgh, 14x20 one hundred pound cokes, terms 30 days less 2 per cent off for cash in 10 days.

The leading mills are now holding their prices on the basis of $3.75 per box of 100 lbs. for coke tins, 14x20 inches. There is still a moderate demand, but most mills have curtailed their output in view of the fact that most consumers have covered their requirements well ahead. In London tin plates continue steady at 12s 9d.

Bessemer steel, 107 lbs, 14x20	$4.50
Bessemer steel, 100 lbs, 14x20	4.35
Bessemer steel, 95 lbs, 14x20	4.25
Bessemer steel, 90 lbs, 14x20	4.20

Am. charcoal ternes, 8-lb. coating—

Worcester grades, 14x20, 107 lbs	$4.45
Worcester grades, 24x20, 100 lbs	4.30
Worcester grades, 20x28, 200 lbs	8.20

For prompt shipment f. o. b. mill—

Coke tins, 14x20, I C	$3.90
Coke tins, 14x20, 100 lbs	3.75
Coke tins, 14x20, 95 lbs	3.70
Coke tins, 14x20, 90 lbs	3.65
Charcoal terne, 20x28, I. C.	7.35
Charcoal terne, 20x28, 200 lbs	7.05

Usual differences for odd sizes and weights.

SHEETS.

No cessation is noted in the demand for black and galvanized sheets. Mills are crowded with specifications and are adding new business for deliveries extending through the year at a rate that foretells trouble when wintry conditions commence breaking freight schedules. Prices are without change, mill shipments, Chicago delivery, being quoted as follows:

Nos. 8, 9 and 10, 1.96½c; Nos. 11 and 12, 2.01½c; Nos. 13 and 14, 2.06½c; Nos. 15 and 16, 2.16½c; box annealed, Nos. 18 and 20, 2.36½c; Nos. 22 and 24, 2.46½c; No. 26, 2.51½c; No. 27, 2.56½c; No. 28, 2.66½c; No. 29, 2.81½c; No. 30, 2.91½c. Jobbers' prices on less than carload lots from store are as follows: No. 10, 2.20c; No. 12, 2.25c; No. 14, 2.30c; No. 16, 2.40c; Nos. 18 and 20, 2.65c; Nos. 22 and 24, 2.70c; No. 26, 2.75c; No. 27, 2.80c; No. 28, 2.85c; No. 30, 3.30c.

Galvanized sheets, mill shipments, are as follows: Nos. 10 and 11, 2.56½c to 2.61½c; Nos. 17 and 21, 2.91½c to 2.96½c; Nos. 22 and 24, 3.06½c to 3.11½c; Nos. 25 and 26, 3.26½c to 3.31½c; No. 27, 3.46½c to 3.51½c; No. 28, 3.71½c to 3.76½c; No. 29, 3.91½c to 3.96½c; No. 30, 4.16½c to 4.21½c. From store, prices on less than carload lots are as follows: Nos. 10 to 20, 3.10c to 3.20c; Nos. 22 and 24, 3.25c to 3.35c; No. 26, 3.45c to 3.55c; No. 27, 3.65c to 3.75c; No. 28, 3.85c to 3.95c; No. 30, 5.05c to 5.15c.

WIRE PRODUCTS.

The demand for smooth wire is very heavy and in the last week fence manufacturers have contracted heavily for their requirements. The western mills are also kept busy on the demand for nails, leaving no chance to accumulate stock. We quote prices as follows:

Wire nails, $2; painted barbed wire, $2.15; galvanized barbed wire, $2.45; smooth annealed wire, $1.85; smooth galvanized wire, $2.15; polished staples, $2.15; galvanized staples, $2.40. Carload lots to retailers, 5 cents higher than above prices; less than carload lots, 15 cents higher.

LEAD.

There has been but little change in the market. The quotations asked by the American Smelting & Refining Company on shipments from its mines within 30 days, in lots of 50 tons and over, are as follows:

	Desilverized.	Corroding.
St. Louis	5.67½	5.87½
Philadelphia	5.80	5.90
Chicago	5.70	5.80
New York	5.75	5.85
Cincinnati	5.75	5.85
Boston	5.85	5.90
Pittsburg	5.80	5.90
Buffalo	5.80	5.90
Baltimore	5.80	5.90
Syracuse	5.80	5.90
Rochester	5.80	5.90
Utica	5.80	5.90
Providence	5.80	5.90

On carload lots 2½c higher per cwt.

Rogers, Brown & Co. will say in their weekly report:

From day to day market conditions improve and reports from all districts are of the most satisfactory character. There is an increasing demand for iron during the last quarter and some inquiries have been received for 1907 business. Locally the week has been productive of good tonnage, well distributed through foundry and forge grades, with strong demand for malleable and special irons. Malleable is becoming scarce and as we advance into the third quarter the sold-up condition of furnaces in the central west is becoming a very important item in calculations covering supply during the balance of this year. This same condition has been true of southern furnaces for some time, and is now very marked in the Pennsylvania field. It would surprise many followers of the pig iron situation to know the number of furnaces which are practically sold up prior to January, 1907.

The mid-summer let-down in trade generally, the mid-summer shut-down of plants for repairs and improvements, the dullness attending the coming of July in the coke fields, all have been practically without recurrence this year, and instead of any let-down there has been remarkable activity, and the impelling force of contracts to be filled has kept mills and shops going full and breaking all records for this season.

It is hard to talk conservatively of the demands being made on manufacturers of iron and steel products. From time to time we have remarked on the great tonnage which has accumulated so far this year on the books of these concerns, and this continues in every line.

The depression in the stock market has had no effect on the iron trade, as it is too firmly intrenched for the present and remaining months of 1906 to be affected by anything but the most unusual cause.

Croakers may find a number of subjects for criticism in the general industrial situation, but this is always the case if one looks far enough. It remains that the strongest feature is current business and the prospects in almost every line.

This statement is best shown in the statement, among others, that the net earnings of the U. S. Steel Corporation for the June quarter will run over thirty-eight million dollars. The government crop report just issued, and on which so much interest has been centered, confirms previous estimates and shows the country's crops to be in splendid shape.

In spite of all conditions as they are, there is no boom in pig iron, nor is it desired. Its steady and almost unchanged level since the first of the first quarter shows an inherent strength which it is expected will carry it on the same or better plane through the remainder of 1906. If this is accomplished and the same methods are in evidence during that time as have governed generally so far in the year, a record for stability will have been established.

The great activity in the Connellsville coke field is almost unprecedented and coke trade generally is in strong shape.

Matthew Addy & Company, Cincinnati, will say in their weekly letter:

Hot weather conditions are not apparent in the pig iron market. Melting of iron is going on at a tremendous rate. The foundries are all busy, and their prospects, save for labor troubles and shortages here and there, are excellent. In fact, the year promises to be one of great prosperity.

The week has been marked by good, steady business. There has been a considerable demand for basic and malleable for spot delivery, and buyers have been disappointed in not finding what they wanted. In fact, the main market demand at the present time seems to be for quick shipment. There is a large inquiry for small lots, from carloads up to 200 tons, for immediate delivery. All kinds of foundry iron are asked for, and it is very evident that consumers were by no means filled up in the recent heavy buying movement. In Northern irons there is a shortage, and consumers are not getting deliveries on time. The situation is not distressing, but it might be much better. Southern iron is not in quite as short supply, but there is no surplus on furnace yards.

Coke has been active in a large wholesale way, but not much has been done by the small consumers.

Current Hardware and Metal Prices.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.

FIRST QUALITY BRIGHT PLATES.

		Per Box
IC	14x20	$7 25
IX	14x20	8 25
IXX	14x20	9 48
IXXX	14x20	10 65
IXXXX	14x20	11 88
IC	20x28	14 50
IX	20x28	16 50
IXX	20x28	18 95
IXXX	20x28	21 35
IXXXX	20x28	23 75

COKE PLATES.

Cokes, 180 lbs	IC	20x28	$9 00
Cokes, 200 lbs	IC	20x28	9 35
Cokes, 216 lbs	IC	20x28	9 75
Cokes 270 lbs	IX	20x28	11 70

PIG IRON.

Lake Sup. Charcoal	$19 00@$19 25
North'n Fdy., No. 1	18 80@ 19 05
North'n Fdy., No. 2	18 80@ 18 55
North'n Fdy., No. 3	17 80@ 18 05
Northern Scotch Fdy.	18 80@ 19 05
Ohio Strong Softeners, No. 1	19 80@ 20 05
Ohio Strong Softeners, No. 2	19 30@ 19 55
Southern Fdy., No. 1	18 15@ 18 40
Southern Fdy., No. 2	17 65@ 17 90
Southern Fdy., No. 3	17 15@ 17 40
Southern Fdy., No. 4	16 65@ 16 90
Southern No. 1 Soft	18 15@ 18 40
Southern No. 2 Soft	17 65@ 17 90
Southern Gray Forge	16 15@ 16 40
Southern Mottled	15 90@ 16 15
Southern Silveries, 4 to 6 per cent Silicon	17 90@ 18 15
Jackson Co. Silveries, 8 to 10¼ Silicon	22 30@ 23 30
Ala. and Geo. Car Wheel	23 90@ 24 40
Malleable Bessemer	18 30@ 18 50
Basic Iron	18 85

BLACK STEEL SHEETS.

Nos. 11-12 per 100 lbs	$2 00
Nos. 13-14 per 100 lbs	2 05
Nos. 15-16 per 100 lbs.	2 10
Nos. 17-21 per 100 lbs.	2 15
Nos. 22-24 per 100 lbs.	2 20
Nos. 25-26 per 100 lbs.	2 25
No. 27 per 100 lbs.	2 30
No. 28 per 100 lbs.	2 40

GALVANIZED.

Nos. 10-11 per 100 lbs.	$2 35
Nos. 12-14 per 100 lbs.	2 45
Nos. 15-16 per 100 lbs.	2 55
Nos. 17-21 per 100 lbs.	2 70
Nos. 22-24 per 100 lbs.	2 85
Nos. 25-26 per 100 lbs.	3 05
No. 27 per 100 lbs.	3 25
No. 28 per 100 lbs.	3 45

POLISHED SHEET STEEL.

No. 24 per 100 lbs.	$4 60
No. 26 per 100 lbs.	4 70
No. 27 per 100 lbs.	4 80
No. 28 per 100 lbs.	4 90

SMOOTH STEEL.

Wood's Smooth, No. 20	$2 90
" " No. 22-24	2 95
" " No. 25-26	3 00
" " No. 27	3 05
" " No. 28	3 15

PATENT PLANISHED SHEET STEEL.

Patent Planished Sheet Steel "A" $10 20, "B"	$9 20
Dickey Planished Sheet Steel	8½c

GALVANIZED IRON.

Regular Sizes.

No 16, per 100 lbs.	$3 20
Nos. 18 & 20, per 100 lbs	3 35
Nos. 23 & 24, per 100 lbs.	3 70
No. 26, per 100 lbs	3 00
No. 27, per 100 lbs	3 50
No. 28, per 100 lbs	4 70
No. 30, per 100 lbs	5 90
Nos. 22 & 24 x 36 in., per 100 lbs	3 10
No. 26 x 36 in., per 100 lbs.	3 90
No. 27 x 36 in., per 100 lbs.	4 10
No. 28 x 36 in., per 100 lbs	4 30

SOLDER.

XXX Guaranteed ½ & ½ per lb.	29 c
Commercial ½ & ½ per lb.	28½c
No. 1 Plumbers	27 c

SHEET ZINC.

600 lb. Casks case, per cwt,	0 9
300 lb. Casks per cwt.	7 9
Sheets per cwt.	7 7

COPPER.

Copper base,	21c

TIN PIGS AND BARS.

Banca, pigs, per lb	50c
Straits, pigs, per lb	50c
Straits in bars, per lb	52c

LEAD.

American Pig	$4 60@$4 62½
Bar	6½c
National (White) brands (in less than 100 lb. lots), per lb	7½c

Sheet.

Full coils per 100 lbs.	$7 00
Cut coils per 100 lbs.	7 25

HARDWARE.

ADZES.

Carpenters'.
- Triumph 40&10%
- Cutmore 50&5%

Coopers'.
- Barton's 20%
- White's 15%

Railroad.
- Triumph 40&5%
- Cutmore 50%

Ship.
- Triumph 33⅓&5%
- Cutmore 40%
- White's 12½%

AMMUNITION.

Caps, Percussion—per 1,000.
- F. L. Waterproof, 1-10s 40c
- G. D. 35c
- Musket 60c

Cartridges.
- Winchester Rim Fire Ctgs. 50&3%
- Winchester Cent Fire, Pistol and Rifle 25&3%
- Winchester Cent Fire, Military and Sporting Ctgs. 15&8%
- Winchester Blank Ctgs. 22 cal. $1 25
- Winchester Blank Ctgs. 32 cal., C. F. 4 60
- Winchester BB Caps, Rnd. ball 1 50
- Winchester BB Caps, Conical ball 1 95
- Winchester Cent. Fire, Military and Sporting Ctgs 15&8%

Primers.
- Berdan Primers $1 00
- Winchester Primers 20%

Shells.
- New Rival Empty Paper Shells, 10 and 12 gauge 25%
- New Rival Empty Paper Shells, 16 gauge 20%
- Repeater Empty 20%
- Leader Smokeless 25%
- Winchester Repeater Loaded Shells 40&5%
- Winchester Leader 40-10&10%
- New Rival Loaded Shells 33⅓ & 11%

Gun Wads—per 1,000.
- Winchester Gun Wads 15%

Powder.

	Each
DuPont's Sporting, kegs	$4 50
" " ½ kegs	2 50
" " ¼ kegs	1 40
Dupont's Sm'k'less. 50-lb. drum	22 45
" " 25-lb. kegs	11 35
" " 12½-lb. kegs	5 80
" " 6¼-lb. kegs	2 97
" " 1-lb. cans	51

Shot.
- Drop shot, sizes smaller than B, 25-lb. bags, per bag 1 70
- Drop shot, B and larger sizes, 25-lb. bags, per bag 1 95
- Buck Shot, 25-lb. bags, per bag 1 95
- Chilled Shot, 25-lb. bags, " 1 95

ANCHORS.

Expansion Screw Anchors 10%

ANVILS.

Trenton, 70 to 80 lbs	9½c per lb
Trenton, 81 to 150 lbs	9¼c per lb

ASBESTOS.

Board and Paper 33⅓%

AUGERS.

Boring Machine 70%
- Irwin's 40&10%

Carpenters' Nut 70%

Hollow.
- Bonney's—list $30.00 75&5%
- Stearn's, No. 3 " 36 00

Post Hole.
- Digwell, 8-inch per doz. 12 50
- Iwan's Post Hole and Well 40&5%
- Vaughan's, 4 to 9-in., per doz. 6 25

Rafting.
- Snell's 50&5%

Ship.
- Ford's, with or without screw 40-5%
- Snell's, " " " 40-5%

AWLS.

Brad.
- No. 3 Handled per doz. $0 40
- No. 1050 Handled " 80
- Shouldered, assorted, 1 to 4, per gro. 1 20
- Patent asst'd, 1 to 4 " 1 20

Harness.
- Common " 1 20
- Patent " 90

Peg.
- Shouldered per gro, $1 20
- Patent " 60

Scratch.
- No. 1, handled " 4 80
- No. 15, socket handled. per doz. 1 25
- No. 7 Stanley " 1 80

Sewing.
- Common per gro. 90
- Patent " 90

AXES.

Boy's Handled.
- Lippincott, 3 lb per doz. $6 50
- Cutmore " 6 75

Broad.
- Triumph, West, Pat 40-10&5%
- Triumph, Can. Pat 50&10%

Firemen's (handled) per doz $13 00

Miners' (handled) " 6 50

Single Bitted (handled).
- Silver Eagle, 3 to 4 lbs., pr dz. $10 50
- Cutmore " " " 8 75
- Keystone " " " 9 25
- Forest Clipper " " " 8 50
- Premier " " " 6 75
- Crescent " " " 5 75

Single Bitted (without handles).
- Cutmore, per doz. 3 to 4 lbs. $6 75
- Forest Clipper, " " 6 50
- Keystone, " " 7 25
- Perfect " " 6 75
- Premier " " 5 00
- Silver Eagle " " 8 25

Double Bitted (without handles).
- Cutmore, 3 to 4 lbs. per doz. $8 75
- Silver Eagle, " " 10 25
- Keystone " " 9 50

The above prices on axes of 3 to 4 lbs. are the base prices.
- 3½ to 4½ lbs. advance 25c.
- 4 to 5 lbs. advance 50c.
- 4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$3.00	4.50	5.50	6.00

BALANCES, SPRING.

Frary's	50%
Pelouze	20%

BARS, CROW.

Pinch or Wedge Point cwt. $3 25

BASKETS.

Clothes.
- Small Willow per doz. $5 75
- Medium " " 6 50
- Large " " 7 25

Galvanized Iron. ½ bu. 1 bu. 1½ bu
- Per doz. $4 00 5 50 7 00

BEATERS.

Carpet. Per doz
- No. 11 Coppered Spring Wire $1 00
- No. 12 Tinned Spring Wire 80
- No. 10 Woven Wire 1 10

Egg. Per doz.
- No. 50 Imp. Dover $0 75
- No. 102 " " tinned 85
- No. 150 " " hotel 1 50
- No. 10 Heavy hotel tinned 2 10
- No. 13 " " " 3 30
- No. 15 " " " 3 60
- No. 18 " " " 4 50

BELLOWS.

Blacksmiths' 65%

Hand.
- 8 inch per doz. $8 00
- 10 inch " 10 00

Moulders'.
- 12 inch " 13 00

BELLS.

Call.
- 3 in. Nickeled Rotary Bell, bronzed base per doz. $5 00

Cow.
- High Grade 60&10%
- Kentucky 70%

Door. Per doz.
- New Departure Automatic $6 00
- Rotary.
- 3 in. Old Copper Bell 4 00
- 3 in. Old Copper Bell, fancy 6 00
- 3 in. Nickeled Steel Bell 4 50
- 3½ in. Nickeled Steel Bell 5 00

Hand.
- Hand Bells, polished 50@50&5%
- White Metal 50%
- Nickel Plated 40%
- Swiss 60&5%
- Silver Chime 33⅓%

Miscellaneous.
- Church and School, steel alloy 50&10%
- Farm, lbs. 40 50 75 100
- Each $1.10 1.40 2.00 2.75

BEVELS, TEE.

Stanley's, rosewood handle, new list	40&5%
Stanley's iron handle	40%

BINDING, OILCLOTH.

Zinc	80&5%
Brass	75%
Brass Plated	75&10%

BITS.

Auger.
- Extra Double Spur 70&10%
- Ford's Car and Machine 40&10%
- Triumph 50&5%
- Ford's Ship 40&10%
- Irwin 50&5%
- Russell Jenning's 25&10%
- Clark's Expansive 60&5%
- Steer's " Small list, $22.00 30%
- " " Large " $26.00 30%
- Irwin Car 45%
- Ford's Ship Auger pattern Car 40&10%

Center 40&10%

Countersink.
- No. 18 Wheeler's per doz. $1 25
- No. 20 " " " 1 75
- American Snail head. " 75
- " Rose " " 90
- " Flat " 75
- Mayhew's Flat " 1 25
- " Snail " 1 25

Dowel.
- New Jennings 40&10%

Gimlet.
- Standard Double Cut 60%
- German Pattern per doz. $0 60
- German " 65
- Gouge " 80
- Spoon " 80
- Countersink " 1 00

Reamer.
- Jenning's Square " 2 50
- Standard Square " 75
- German Octagon " 75

Screw Driver.
- No. 7 Common " 50
- No. 1 Triumph " 1 25
- No. 2 " " 1 50
- No. 340 Shepardson's " 1 25
- No. 1 Smith's " 1 25

BLACKING, STOVE. (See Polish)

BLADES, SAW.

Butchers'.
Standard ¾ & 1¼ in. 40%
Clock Spring 40%
Star 15%
Coil ..... each $1 50

Hack.
Disston's ..... 25&5%
Flexible ..... 33⅓&5%
Cutmore 33⅓%

Wood.
Jackson's ..... per doz. $2 25
Disston's—No. 6, 16, 26 & 045.. 4 25
Triumph 3 50
Forest Clipper 3 00

BLOCKS.

Snatch.
Wooden ..... 55&10%
Steel ..... 40&10%

Tackle.
Iron Strapped ..... 70&10%
Coin Steel ..... 60&10%

BOARDS.

Stove 40%

Wash.
Globe, single ..... per doz. $2 25
" double ..... " 2 75
Magnolia ..... " 2 65
Crystal Glass ..... " 3 40
Brass King ..... " 3 40
Nickel Plate ..... " 3 40
Enamel King ..... " 3 40

BOBS, PLUMB.

Carpenters'.
No. 2, iron ..... per doz. $0 65
No. 00, " ..... " 1 30
No. 0, " ..... " 1 80
No. 3, lead ..... " 2 90
No. 4, " ..... " 3 40
No. 113, brass plated. " 1 10
No. N30, nickel plat'd " 1 30
No. N31, " " " 1 85

BOLTS.

Carriage, Machine, Etc.
Carriage ⅜x6 and sizes smaller and shorter 75%
Carriage, sizes larger and longer than ⅜x6 ..... 65%
Machine, ⅜x4 and sizes smaller and shorter 75%
Machine, sizes larger and longer than ⅜x12 ..... 65%
Machine, longer and larger than ⅜x12 ..... 65%
Elevator ..... 50-10&5%
Plow ..... 60&10%
Stove ..... 80&10&5%
Tire ..... 75&10%
Wagon Box Strap ..... 70&10%

Mortise Door.
Gem, iron 60%
" bronze plated 20%

Barrel.
Cast 60%
Wrought 75%
" Bronzed 50%

Flush.
Wrought ..... 50&10%

Spring.
Wrought ..... 70&10%
" Heavy 70%

Square.
Cast ..... 50&10%
Wrought 75%

BORERS.

Angular.
Miller's Falls ..... per doz. $13 75

Bung.
Each.
Enterprise Mfg. Co.'s No. 1 ..... $1 25
" " " No. 2 ..... 1 75
Less 20%@25%

BOXES.

Mail, No. 1 2 10
Per doz $3.25 4.25 17.50

Miter.
New Langdon ..... 15&5%
Stanley's 30%
Seavey's ..... each $1 50

BRACES.

Barber's ..... 50&10&10@50&10&10&15%
Fray's Genuine Spofford's 60%
" Nos. 66 to 146 ..... 50%
" No. 0108 ..... $3 50
" No. 0110 ..... 3 75
" No. 08 ..... 2 75
" No. 010 ..... 2 85

BRACKETS.

Hay-Rack.
Wenzelmann's No. 1 per doz. $9 60
" No. 2 " 10 20

Shelf.
Cast Iron, Bronzed 50, 10, 5%
Griffin Wrought Steel ..... 75&10%
" Folding ..... 70&10%

BROILERS.

Wire ..... 70&10%
Crown, Self Basting, No. 80. doz. $3 50

BUCKETS.

Pump Rubber.
Wychoff ..... per gr. $4 75
Cooper ..... " 4 75
Champion ..... " 7 50
Victor ..... " 9 25
Star ..... " 5 00
IXL ..... " 6 75

Well.
Galv'd Qts 10 12 14
Per doz $2.90 $3.25 $3.40
Wooden, top ear, plain, per doz 3 75
" " swivel " 4 85

BUCKS, SAW.

Folding ..... per doz. $2 10

BURRS, RIVETING.

Copper Burrs only ..... 35-10&5%
Tinners' Iron Burrs only 70%

BUTTS.

Cast Iron ..... 65-10&5%
Wrought Brass 15%
Wrought Steel Bright.
Griffin ..... 75&5%
" Ba l Tip ..... 75&10%
" " Bronzed 70%
Wrought Steel, Japanned.
Nos. 731 and 733 ..... 70-10-10&10%

CALIPERS.

Double 78%
Inside and Outside ..... 70&10%
Wing 70%

CALKS.

Logger's Boot.
(Lufkin R. Co.'s), per M. $3 75

Toe.
Shoenberger ..... per ℔ 5 c
Bessemer ..... " 4½c
American ..... " 7 c
Swedes ..... " 8½c

CANS.

Cheese Factory.
Ontario Pattern.
Gallons 20 30 40
Each $3.85 $4.50 $5.65

Milk.
Holstein.
Nos. 300 301 302
Gals 5 8 10
Per doz $20.00 $21.00 $23.00
Chicago Pattern.
Nos. 105 108 110
Per doz $16.50 $18.50 $20.50
Iowa Pattern.
Nos. 408 410
Per doz $20.50 $21.50
New Elgin Pattern.
Nos. 705 708 710
Per doz 20.50 $22.50 $23.50
Burn Pattern.
Nos. 700 701
Gals 8 10
Price $1.85 $2.10

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.
Diamond, Regular ..... each $3 50
Diamond, Sling ..... " 6 50
Myers' Imperial ..... " 3 50
" Clover Leaf ..... " 3 65

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing ..... 50&10%
Bed ..... 60&5%
Common Plate.
Brass Wheel ..... 60&10%
Iron and porcelain wheels, new list ..... 60&5%
Philadelphia Plate, new list.. 70%
Martin's 60%
Payson's ..... 75&10%

CATCHERS, GRASS.

Carroll s No. C ..... per doz. $4.25
Wildermuth's
Nos. 1 2 3
Per doz $5.60 $5.75 $6.25
Nos 4 5 6
Per doz $8.75 $9.50 $10.00

CHAIN AND CHAINS.

Breast Chains.
Doubleslack ..... doz. pairs $5 75
With Covert snaps. " 5 00
With slide ..... " 3 25
Without slide ..... " 2 85

Bright Ox Chains.
⅜ in. $7.25; ½ in. $5.45 per 100 lbs.

Cable Coil Chain.
Inch ..... ⅜ ½ ⅝ ¾
Per 100 lbs.. $9.80 $7.00 $6.00 $5.20
Inch ..... ⅞ 1 1⅛ 1¼
Per 100 lbs.. $5.00 $4.90 $4.75 $4.62
Inch ..... ½ 1 1¼
Per 100 lbs.. $4.55 $4.55 $4.62

Cable Log Chain.
Advance 25c per 100 lb. on Cable Coil

Cow Tie Chains.
American 2 toggle ..... 50&5%
" toggle and snap .. 50&5%
" open & closed ring, 50&5%

Halter Chains.
American, new list ..... 33⅓&5%
German ..... 60&10%
Niagara, new list ..... 40&
Brown's, " ..... 40&5%

Picture Chains.
Light Brass, 3 ft ..... per doz. 50c
Heavy Brass, 3 ft ..... " 75c

Pump Chain.
Galvanized, per 100 lbs $5.00

Safety Chain.
Brass ..... 60&10%

Special Steel Loading Chain.
Inch ..... ½ ⅝ ¾
Per 100 lbs ... $16.00 $13.50 $12.50

Stretcher Chains.
⅝ in. $8.50; ½ in. $7.75 per 100 lbs.

Tie-Out Chains.
Brown's ..... 70&10%

Trace Chains.
Western Standard.
6½— 6-2 ..... per pair 30c
6½— 8-2 ..... " 34c
6½— 8-3 ..... " 33c
6½—10-2 ..... " 38c
7 — 8-2 ..... " 38c
7 —10-2 ..... " 43c
7 —10-1 ..... " 48c
7 —10-0 ..... " 60c
Add 2c per pair for Hooks.
Add 2c " for Twist Link.

Wagon Stay Chains.
Inch ..... ½ ⅝ ¾
Per 100 lbs ... $6.50 $6.00 $5.50

CHALK, CARPENTERS'.

Blue ..... per gross 75c
Red ..... " 65c
White ..... " 55c
Common White Sch'l Crayon 8c

CHARCOAL

In barrels ..... per bag 85c

CHECKS, DOOR.

Blount 33⅓%
Sargent's 33⅓%

CHIMNEY TOPS.

Iwan's Volcano 50%

CHISELS.

Box,
Inches 10 12 14
Round, per doz. $2 10 $2.25 $2.75
Flat " 2.85 3.60 4.20

Cold.
Good quality ..... per ℔ 10@19c

Socket, Framing and Firmer.
Barton's 20%
P ck, Stow & Wilcox Co. 75%
For beveled back, add per doz. .60c

Tanged, Firmer.
With handles ..... 30&5%

Choppers, See Cutters, Meat.

CHUCKS, DRILL.

Goodell's for Goodell's Screw Drivers ..... per doz. $6 25
Yankee, for Yankee Screw Drivers 5 00

CHURNS.

Anti-Bent Wood, Gal.. 5 7 10
Each $3.90 $4.60 $4.85
Belle, Barrel 70%
Common Dash, Gal.. 4 5 6
Per doz $7.75 $8.50 $10.50
Hero 70%
Union, Gal 5 7 10
Each $3.65 $3.90 $4.75

CLAMPS.

Adjustable.
Martin's 30%

Carpenters'
Steel Bar 25%

Hose.
Sherman s, brass, ¾ in., per doz. .33c
Double, brass, ¾ in., " 65c

Saw Filers.
Disston's list, $30.00 ..... 30%
Stearn's, No. 0, $3.50; No. 1, $11.50; No. 3, $5.00 doz.
Wentworth's. No. 1 $6.00; No. 3 $7.50

CLAWS, TACK.

Cast, wood hdle ..... per doz. 45@60c
Forged steel, wood hdle " $0.80
Solid Steel ..... " 1.60
Giant ..... " .60

CLEANERS.

Drain.
Iwan's Adjustable 55%
Iwan's Stationary ..... 40&5%

Pot.
Wire ..... per doz. $0.55

Side-walk.
Steel ..... per doz. $3.25
XLCR ..... 65&5%

CLEAVERS.

Family.
Griffin, In 6 7 8
Per doz $5.50 $5.75 $6.25
Royal ..... per doz. 2 25

Butchers.
Beattys, Kitchen 40%

CLEVISES.

Malleable ..... 4½c ℔

CLIPPERS.

Bolt ..... $1.90@$4.75

CLIPS.

Axle ..... 65&5%

Damper.
Standard ..... per doz. 65c
Troy ..... " 38c

Hame ..... " 17c

CLOTH.

Emery.
Triumph ..... 50&10%
B. & A 50%

Hardware Wire—full rolls (100 ft.)
2 to 8 mesh black, per 100 sq. ft.. $1 85
9 to 12 " " " " 2 15
2 to 8 " galv. " " 3 00
7 and 8 " " " " 4 50

Screen Wire.
12 mesh, painted, per 100 sq. ft.. $1 05
14 " " " " 1 50

COCKS AND FAUCETS.

Compression Plain Bibbs ... 60-10-2½%
Lever Bibb Cocks ..... 60&10&5%
Compression Hose Bibbs 60-10%
Telegraph Faucets (new list) ... 50-5%
Racking Cocks (new list) ..... 60&20%
Compression Lock C'ks(n'w list).. 70%
Andrew's Brass Faucets 70%
Angle Plug Faucets, per doz.... $0.85
Milk Can Faucets, per doz... $2.60-4.20
Petroleum Faucets (new list) 70&10%

COLLARS, STOVE PIPE.

Inches 5 6 7
Plain Tin .... per gro $1.60 $2.00 $3.00
Japanned Tin " 3.00 3.00 4.25
Lacquered Brass " 2.75 3.25 4.00

COMBS, CURRY.

Nos 000 11 15 39 89 108
Per doz. $0.32 .55 1.85 .85 1.10 .75
Nos 290 320 300 532 620 1400
Per doz. $1.00 .80 1.30 1.15 .70 1.35

COMPASSES.

Carpenters' 70%
Pencil—Faber's ..... per doz. $1.00

COPPER—See Metals.

COPPERS.

Soldering.
1 ℔ ..... per ℔ 32c
1½ ℔ ..... 29c 2 ℔ ..... " 28c
3 ℔ and larger ..... " 26c

CORD.

Picture.
White Wire ..... 80-10&5%

Sash.
Baltic Braided Flax ..... per ℔ 20c
Silver Lake, white 7-32 in. " 29c
" " " 8-32 in. " 22c
Keystone ..... 8-32 in. " 26c

CORKSCREWS.

Humason & Beckley 33⅓%
Walker's 33⅓%
Williamson's Regular 50%
Williamson's Forged Worm 50%

COTTERS, SPRING.

All sizes—new list ..... 90&10%

COUPLINGS, HOSE.

Brass ..... per doz. $1.00
Brass Plated ..... " .85

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine ... per doz. $22.75

CRAYONS—See Chalk.

CROW BARS.

Pinch or Wedge Point, per 100 lbs. $3.25

CUTTERS.

Glass.
Red Devil 45%
Smith & Hemenway Co. 50%
Woodward 40%
Meat.
Enterprise Nos. 5, 10, 12, 22, 32 and 42 ..... 25%
No. 202, list, $1.50 ea. ..... 40&7½%
Universal... Nos. 1 2 3
Per doz. $10.50 $12.50 $17.00
Pipe.
Stanwoods... No. 1 2 3
Each $0.85 $1.50 $4 00
Slaw and Crout.
3-knife Crout ..... per doz. $9 75
1-knife Slaw ..... " 1 65
2-knife " ..... " 2 25
Washer ..... " 7 75

DAMPERS, STOVE PIPE.

Standard ..... 50&10%
American ..... 45&10%

DIES, STOCKS AND

Discount ..... 40&5%
King's, Little Giant 33⅓%

DIGGERS.

Post Hole.
Acme ..... per doz. $8 75
Atlas ..... " 8 50
Eagle ..... " 5 75
Eureka ..... " 7 00
Hercules ..... " 9 75
Iwan's Split Handle.. " 7 00
Iwan's Perfection ..... " 7 75
Iwan's Hercules pattern " 9 00
Ryan's ..... " 17 00
See also Augers—Post Hole.

DOOR CHECKS—See Door.

DOORS, SCREEN.

⅞ in. 4-panel painted, per doz. $7 93
1⅛ in. " " " 9 50
1⅛ in. 3-panel natural pine, fancy ..... per doz. 12 40

DOOR HANGERS—See Hangers.

DRILLS.

Bit Stock ..... 60% & 65&5%
Blacksmith's Twist 60%
Breast.
Common ..... each, $2 25
Millers Falls ..... " 2 10
Hand
Goodell's Automatic.
Nos. 01 03 3 20
Per doz.. $7.75 $12.50 $14.25 $11 00
Goodell's Single Gear per doz. 15 75
Millers' Falls " " " 12 75
" " Double " " 15 25
Reciprocating
Goodell ..... per doz. $16 50
Bit Stock.
Standard List... 60&5%@60%@10%

DRIVERS, SCREW.

Hurwood ..... 40-10&10%
Standard ..... 65&10%
Triumph ..... 70&5%
Champion 45%
" Pattern ..... 60, 10&5%
Clark's Interchangeable 30%
Edison 60%
Reed's Lightning ..... 45&5%
Goodell's Spiral ..... 50, 10, 5&2½%
Yankee Ratchet 50%
" " Spiral ..... 50&10%
Smith & Hemenway Co. ..... 40&5%

EAVES TROUGH. GALVANIZED.

Territory.	L. C. L.
Eastern	80&2½%
Central	75&10&7½%
Southern	75&10
Western	75&10
S. Western	75&2½

Terms, 2% for cash. Factory shipments generally delivered.

See also conductor pipe and elbows.

EGG BEATERS—See Beaters.

ELBOWS.

Adjustable Stove.

Inches	5	6	7
Smooth per doz.	$0.70	$0.75	$1.10
Plan'd "	1.80	2.00	2.65

Corrugated Conductor.
Discount ..... 60&10%
Corrugated Stove.

Inches	5	6	7
Smooth, per doz.	$0.70	$0.80	$1.30
Pol'd "	1.30	1.40	2.10
Plan'd "	2.00	2.20	3.00

Four-Piece Stove.

Inches	5	6	7
Smooth. per doz.	0.70	$0.52	$0.80
Pol'd "	.80	1.00	1.20
Plan'd "	1.40	1.40	2.40

EMERY CLOTH—See Cloth.

EMERY, TURKISH.

Size	5-lb. pkgs.	½ kegs,	kegs
No. 60 to 150, per lb.	6c	4c	4c
Flour "	5c	3c	3c

ENAMEL, IRON.

Nubian, ½-pt. cans ..... per doz. 1 80
Peerless 1 50
Keystone 1 25

EXTRACTORS, PIG.

See Forceps, Pig.

EYES.

Bright Wire Screw—See Goods, B. W
Drifting Pick ..... 60, 10&5%
Hooks and—
Brass 55%
Iron ..... 65&5%

FASTENERS, STORM SASH

Schroeder's ..... per doz. 85
Sensible ..... " 1 15

FAUCETS—See Cocks.

FILES AND RASPS.

Nicholson's ..... 70&10%
Disston's ..... 75&10%
Challenge ..... 70&10%
Royal ..... 80&10%

FLUE STOPPERS—See Stoppers.

FORCEPS, PIG.

Superior ..... per doz. $4 75
Whisson's Imp ..... " 5 25

FORKS.

These goods are sold net this year.
Barley.
Steel, New List ..... 70&10&5
Wood, 4 tines, per doz. $3.25
Coal, Coke, Cottonseed 60%
Hay.
Batcheller, 2 tine ..... 60&10%
" 3 " 70%
" 4 " ..... 70&7½%
Digging ..... 70&10%
Scoop 40%
Header.
Batcheller, 3 tine ..... 65½&5%
" 4 " ..... 65&10%
Manure.
Batcheller, 4 tine ..... 70&5%
Ore 40%
Spading.
Batcheller ..... 80&10%

FRAMES.

Hack Saw.
Union ..... per doz. $5 75
Jenning's ..... " 6 25
Cast ..... " 2 50

FREEZERS, ICE CREAM.

Arctic.

Qts.	1	2	3	4	6
Each	$1.10	1.30	1.50	1.80	2.30
Qts.	8	10	12	15	
Each	$2.95	3.80	4.50	5.30	

White Mountain.
20 qt., New Platform... each $19 10
25 qt., " " " 22 60
25 qt., Sampson Power. " 43 50
40 qt., " " " 58 25

GAUGES.

Butt and Rabbet.
Stanley R. & L. Co.'s ..... 30&10%
Cream Pail.
Fairmont ..... per doz. $3 75
Marking, Mortise, etc. ..... 50&10%
Saw.
Atkin's, single, 55c; dbl. 80c per doz
Wire.
Disston's 25%

GIMLETS.

Discount ..... 35@40%

GLASS, WINDOW.

First two brackets ..... 90&20%
Above " " ..... 90&10%

GLASSES, LEVEL.

Stanley R. & L. Co. ..... 50&5%

GLUE.

Bulk.
B Amber ..... per lb. 11 c
A White ..... " 13½c
H. S. Amber ..... " 15½c
Liquid.
Army & Navy 40%
Le Page's—
List "A" 37½%
List "B" 33⅓%
List "C" 25%

GOODS.

Bright Wire ..... 90&10%

GREASE, AXLE.

Wood Boxes.
Diamond ..... per gro. $5 50
Frazer's 9 50
Hub Lightning 5 25
Paragon 6 75
Wood Pails.
Frazer's, 15 lb. 80c; 25 lb. $1.30 each
Hub Lightning, 15 lb. 55c; 25 lb. 70c each.
Tin Cans.
Chemellene Graphite.
1 ½ per gross $9 50
3 lb. per gross 25 00
5 lb. per gross 37 00

GRIDDLES.

Soapstone ..... 40&10%

GRINDSTONES.

Family.

Inches	7	8	9
Per doz.	$8.25	9.00	10.50

Loose.
Per ton ..... $20 00@$21 00
Mounted.

Ball Bearing	1	2	3
Each	$3.15	3.00	2.85
Common Bearing	1	2	3
Each	$3.00	2.80	2.65

GUN WADS.
(See Ammunition.)

HAFTS, AWL.

Brad.
Common ..... per doz. $0 19
Peg.
Common ..... " 22
Patent, plain top ..... " 47
" leather top... " 52
Sewing.
Common ..... " 22
Patent ..... " 52

HALTERS.

Jute Rope ..... per doz. $0 85
Sisal Rope ..... " 1 85
Web ..... " 1 75
Leather, rope tie ..... " 6 50
" leather tie ..... " 8 50

HAMMERS, HANDLED.

Blacksmiths' Hand.
Maydole's ..... 40&10%
Engineers'.
Maydole's ..... 40&10%
Farriers'.
Maydole's ..... 35&5%
Machinists'.
Maydole's ..... 40&10%
Nail.
Triumph 40%
Quaker City ..... per doz. $3 00
Cast ..... " 1 10
Maydole's ..... 30&5%
Riveting.
Maydole's ..... 35&5%
Shoe.
Cast ..... per doz. 75c
Tack.
All Iron ..... per doz. $0 35
Pol'd Iron, Hickory hdl. " 50
Mall. Iron, Inlaid ..... " 1 55
Magnetic 1 2 3
Per doz 70c 80c $1.00
Magazine ..... per doz. $4 75

HAMMERS, HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs 80%
5 lbs. and over ..... 80&10%
Masons'.
Single & Double Face 75%

HANDLES.

Auger.
Common Assorted ... per doz. $0 38
Peck's Adjustable ... " 2 10
Ives' " ... per set 1 35
Axe 60%
Chisel.
Hickory, Tanged Firmer, Assorted, 25c; Large, 27c per doz.
Hickory, Socket Firmer, Assorted 18c; Large, 22c per doz.
Applewood, Tanged Firmer, Assorted, 29c; large, 38c per doz.
Applewood Socket, Firmer, Assorted ..... per doz. 24c
Coal Pick ..... 50&10%
Drifting Pick ..... 50&10%
File, assorted 13c, large 16c per doz.
Hammer.
Adze Eye ..... per doz. 40c
Blacksmiths' ..... per doz. 40c@70c
Machinists' ..... " 45c@70c
Hatchet ..... per doz. 40c
Hay and Manure Fork ..... 40&10%
Hoe and Rake ..... 40&10%
Saw.
Plain ..... per doz. 75c
Varnished ..... " 80c
Screw Driver.
Assorted ..... " 37c
Large ..... " 48c
Shovel and Spade 40%

HANGERS.

Barn Door.
Challenge ..... 60&10%
Peerless ..... 70&10%
Silver Star ..... 60&5%
Storm King ..... 60@5%
World's Best 50%
Wagner's Adjustable ..... 70&10%
Warehouse 60%
Griffin ..... 70&10%
Conductor Pipe.
Griffin ..... 70&10%
Iwan's Perfection 50%
Eave Trough.
Baker's ..... per gro. $2 35
Imperial 20%
Wire 35%
Parlor Door.
Acme ..... per set $3 75
Ives' Improved ..... " 2 50
Lane's Standard ..... " 3 50
" New Model ..... " 3 10
Le Roy Noiseless ..... " 4 00
Richards' ..... 40-10&5%

HASPS.

Hinge, Wrought ..... 50&5%
With Staples—See Staples.

HATCHETS.

Challenge 40%
Blood's 50%
Cast Claw ..... per doz. $1 20@1 45
Cast Shingling ..... " $0 95@1 20
Germantown 40%
Plumb's 40%
Underhill's Star Lath ..... 40&10%

HAY KNIVES.

See Knives.

HAY RACK BRACKETS.

Wenzleman's No. 1 .... per doz. $ 9 60
No. 2 .... " 10 20

HINGES.

Blind.
Clark's Gravity ... per doz. sets 80c
Parker's 65%
Shepherd's Noiseless, for Wood casing ..... per doz. 1 05
Gate.

Clark's	1	2	3
Hgs & Ltch .... doz.	$2.35	2.60	3.65
Hinges only .... "	1.70	1.90	
Latches only... "	.70	.75	

Knuckle ..... per doz. prs. $6 00
Leed's ..... " sets 6 75
Superior ..... " prs. 9 50
Spring.
American 20%
Bommer Bros. Ball B'g Floor.. 35%
Bommer Bros. Spring Hinges.. 40%
Chicago ..... 25&5%
Columbia Dbl Acting .... 40&10&5%
Gem 25%
Ideal Detachable .... per gro. $11.10
Matchless 30%
New Idea ..... per gro. $8.40
Oxford 20%
Wrought Iron.
New Lists .....
Griffin.
Light Strap Hinges ..... 65&10&5%
Heavy Strap Hinges ..... 75&10%
Light T Hinges ..... 60&10&7½%
Heavy T Hinges ..... 55&10%
Extra Heavy T Hinges .... 70-10&5%
Cor. Heavy Strap ..... 75&10%
Cor. Ex. Heavy T ..... 70&10&5%
Screw Hook and Strap.
6 to 12 in ..... per 100 lbs. $3 90
14 to 20 in ..... " " 3 65
22 to 36 in ..... " " 3 40
Screw Hook and Eye.
¾ in ..... per 100 lbs. $6 55
⅝ in ..... " " 7 60
½ in ..... " " 9 45

HOES.

Garden ..... 75&5%
Grub.
Extra 70%
Hazel ..... per doz. $5 00
Ladies' and Boys' ..... 75&10%
Mortar 80%
Planter's Eye 62½%
Weed ..... 75&15%

HOLLOW WARE—See Ware

HOOKS.

And Eyes.
Brass ..... 50&10&5%
Iron ..... 65&10%
Awning ..... per gro. $1 80
Belt.
Brown's ..... 70&5%
Jones' ..... 65&5%
Bench.
See Stops, Bench.

Box.
Inch..... 6 8 10 12
Per doz.....$1.35 1.65 1.75 2.30
Humason & Beckley's, per doz. 2 50
(See Goods, Bright Wire.)

Bush.
Co mon Axe Handle. per doz. $7 00

Chain
Incl... ¼&5/16 ⅜ 7/16 ½
Per 100 $7.60 - 8.10 9.75 11.50 12 60

Clothes Line.
Japanned.....per doz. 22c@24c
Galvanized..... " 40c

Coat and Hat.
Cast Iron .....per gro. 72c@$1 50
Gem Wire.....70%

Conductor.
Malleable.....50&10%@50&10&5%
Wrought .....40&10%@50%

Corn.
Common, unpolished, per doz. $1 35
" polished.... " 1 80
"Cut Easy"..... " 2 75

Gate.
See Goods, Bright Wire.

Grass.
Common. Nos..... 2 3 1
Per doz $1.50 1.60 1.70
German.....per doz. 1 75
Little Giant..... " 3 00

Hammock.
With Plate.....per doz. 50c
With Screw..... " 45c

Lambrequin, or Drapery, per gro. 21c

Picture .....50%@50&10%

Potato and Manure.....70&12½%

Screw.
Brass.....80&20%
(See Goods, Bright Wire.)

Seat Spring.....per ℔. 5½c

HOOPS, TUB.

Ever Ready .....per case $1 70

HOSE, GARDEN.

3 ply ¾ in. 35 ℔. pressure per ft....4½c
3 " ¾ " 50 " " " 6½c
3 " ¾ " 70 " " " 6½c
3 " ¾ " 70 " " " ....8 c
4 " ¾ " 80 " " " ....8 c
4 " ¾ " 80 " " " ... 9½c
6 " ¾ " 125 " " " ...10½c
8 " ¾ " 150 " " " 12c
Cotton ¾ in. 75 ℔. pressure per ft. 6c
" ¾ " 150 " " " 8c

HUSKERS.

Boss.
Nos..... B BB E 200
Per doz.... $2.00 2.00 1.75 .80
Nos..... L PP P K
Per gro..... $5.40 6.00 6.00 10.50
Nos..... 2000 3000 O
Per gro..... $3.50 9.00 24.50
Nos..... 60 59 64 68
Per doz.....$2.15 2.15 .85 1.45

Brinkerhoff's.
Per gro.....$14 40

Clark's
Nos..... 1 63 200 400
Per doz.... $0.40 .75 .75 1.75
Nos..... 200s 40s 3s 4s
Per doz..... $0.85 1.50 1.25 1.25
Nos.....A AB F
Per doz.....$3.00 $4.25 $2.50

IRON.

See Metals—First column.

IRONS.

Curling.
Common.....per doz. 33c@48c
Princess .....per doz. $0 65
Yale..... " 84
Oxford ..... " 1 15
Ruby ..... " 1 50
Tourist, Folding..... " 90

Pinking ..... " 70

Plane.
Wood Bench.....20&5%
Stanley R. & L. Co. (new list) ...25%

Sad.
Charcoal .....per doz. $11 00
Common, Polished, per 100 ℔. 3 25
" Nickel plated, " 4 25
Chinese Polishing.....per doz. 7 40
Laundry. No. 1 ..... " 5 75
" No. 2 ..... " 6 25
Mrs. Pott's,
No. 50 J, Enterprise...per set 79c
No. 55 J, " ... " 76c
No. 50 T, " ... " 82c
No. 55 T, " ... " 79c
No. 50, Howells..... " 74c
No. 55, " ..... " 71c
Tailors' Sad.....per ℔. 4½c
" Geese ..... " 4½c

Tuyere.
Single Duck Nest.....per doz. $5 25
Double " " ..... " 6 25
Sutton .....each 2 60

JACKS.

Locomotive.....75&5%

Wagon.
Oliver.
Nos..... 0 00
Each.....$0.60 $0.85

Standard.
Nos..... 1 2
Each..... $0.60 1.00
Wilcox.
Nos..... 1 2 3
Each.....$0.85 1.20 2.90

KETTLES.

Brass.....15%
Cauldron 45%
Copper.....per ℔. 27c
Maslin 66⅔%
Sugar .....50&5%

KNIVES.

Beet Topping.
Clyde, 9-in. Scimiter Blade, dz. $3 85
California.....3 40

Cooper's Hoop.....15%

Corn.
Clipper.....per doz. $1 75
Disston's..... " 2 75
Earle's..... " 3 00
Woodford..... " 2 25

Drawing.
Standard 70%
Adjustable.....15%
Barton's Carpenters'.....10%
Folding Handle.....25&5%

Hay.
American, Sickle Edge..doz $10 50
Canton, Sickle Edge..... " 8 25
Heath's ..... " 8 00
Iwan's Sickle Edge..... " 9 50
Iwan's Impv'd Serrated.. " 10 00
Lightn'g, Holt's Genuine " 6 50
Lightning Pattern..... " 6 00
Wadsworth's Sp'r Point " 8 50

Hedge.
Challenge .....per doz. $6 00
Disston's..... " 3 75

Mincing.
Common, Single ..... " 40
" Double ..... " 50
Streeter, 4 Blade..... " 1 30
" 6 Blade..... " 2 00

Putty.
Common..... " 60@1 00
Lander's..... per doz. $1 40@1 75

Scraping.
Beech Handle.....75@1 00
Lander's.....5 25@6 00

KNOBS.

Door.
Mineral .....per doz. $0 73
Porcelain ..... " 83
Jet..... " 83

LADDERS.

Common Long.
Per ft .....9c@14c

Extension.
Per ft 12c

Step.
Common, per ft.....6½c
" with Shelf, add 10c.
Keystone.....15c
Triumph, per ft 20c

LANTERNS.

Bull's Eye Police.
3-in. Flash Light.....per doz.$6 00
2¾-in. Regular..... " 4 00
3-in. Regular..... " 5 00

Tubular.
Prisco..... .....40&10&5%

LEADERS, CATTLE.

Nos 1 2 3
Per doz.....$0 55 $0 70 $2 75

LEATHER, LACE.

Cut.....40&10%

Slaes.
Ex. Quality.....per sq. ft. 24c

LEATHERS, PUMP.

Valve and Plunger 45%

LIFTERS.

Stove Cover.
Coppered.....per gro. 1 75@3 65
Ideal..... " 5 50
Alaska, Coppered " 4 00
" Nickeled " 5 00

Transom.
Payson's.....80%

LINES.

Chalk.
Twisted in 20-ft. hanks.
Nos..... 4 6 7 8 9
Per gross $1 50 2 00 2 25 2 50 3 00
Twisted in 50-ft. balls.
Nos..... 1 2 3 4
Per doz.....25c 30c 35c 41c
Braided in 20-ft. hanks.
Nos..... 0 1 2 3
Per doz.....22c 25c 31c 35c
Masons', in 100-ft. hanks..doz... 80c

Clothes.
60-ft. Jute.....per doz. $0 80
72-ft. " ..... " 1 00
60-ft. Sisal ..... " 1 30
72-ft. " ..... " 2 00
50-ft. Cotton ..... " 1 00
50-ft. Braided Cotton. " 1 10

LINING, STOVE.

In Bricks.....per crate 42c

MACHINES.

Boring.	Without Augers	With Augers
Angular... .per doz.	3 00	4 40
Upright.... "	2 60	4 00

Leather Riveting.
Chicago, Pomeroy....per doz. $9 00
Excelsior ..... " 2 00
Handy ..... " 2 00
Little Giant..... " 3 00
Pony, Pomeroy..... " 7 20

Washing.
Boss 1 2 5
Per doz.....$55.20 61.80 68.40
Winner..... .....per doz. 54 00
Keystone ..... " 54 00
Round Wayne..... " 26 50
U. S. Steel..... " 60 00
Advance, f.o.b. Chic'go " 24 50

MAIL BOXES.

See Boxes.

MALLETS.

Carpenters'.
Fibre Head, Small ...per doz. $5 00
" " Medium. " 5 75
" " Large... " 6 75
Round Hickory..... " 1 75
" Lignumvitæ .. " 2 85
Square Hickory..... " 1 75
" Lignumvitæ.. " 3 40

Tinners'.
Applewood ..... " 1 70
Hickory..... " 75@1 15
Hickory Sheet Iron.. " 1 30

MATS.

Door.
National Rigid.....50, 10&5%
Queen Flexible.....50%

Stove.
No. 2. .....per gross. $2.25
No. 1. ..... " 2.50
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. .75
No. 2 Asbestos Toasters, with ring.....per doz. .5

MATTOCKS.

Warwood 70%
Extra 60%

MAULS.

Iron. lbs. 10 13 16 18 21
Per doz. $3.00 3.60 4.50 5.00 5.75
Wood face, lbs. 10 12 14
Per doz $5.00 5.50 6.00

Wood Choppers'.
Lake Super'r & Oregon Pat.. 80&5%

MEASURES.

	¼ pk.	1 pk.	bu
Galvanized. per dz.	$2.00	$2.75	$3.60
Japanned... "	1.50	2.20	2.90

METAL.

Babbitt.
Alm .....per lb. 7½c
Best..... " 13 c
Common, No. 4..... " 6½c
Copper Mixed ..... " 19 c
Tony ..... " 9½c
See Metals—In first column.

MICA.

First Quality.....25%
Second Quality.....35%

MILLS, COFFEE.

Enterprise 25%
Parker.....50%
Arcade 50%

MITRE BOXES.

See boxes.

MOPS.

Erie.....per doz. $3 15

Handled Cotton.
Pounds..... ¾ 1 1¼ 2
Per dozen...$2.00 2.35 2.65 3.25

MOWERS, LAWN.

Ball-Bearing.
Inches..... 14 16 18 20
Each $6.25 6.75 7.25 8.00

Cheap Grades.
Inches..... 12 14 16 18
Each $2.25 2.25 2.35 2.50

Clipper.....50, 10&10%

Yale.
Inches..... 4 16 18 20
Each.....$3.50 3.75 4.00 4.35

Philadelphia.
All Styles Except A & E 60, 10&10%
Style A.....50&10%
Style E, High Wheel..60,10,10&10%
Drevels.....50%
All Day.....Net Price

NAILS.

Cut Steel.....rates, $2 10

Horse Shoe.
Ausable .....55&5%
Capewell 15%
Perfect .....55&5%
Putnam 20-5%
Star 30%

Picture.
Brass Heads .....40&10%
Judd's.....60&10%

Brads.....85&10%

Furniture .....60&10%

Wire.
Small Lots.....$2 10
Carload " 2 05
Cement Coated..... 1 95

NAIL PULLERS.

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.

Galvanized before Weav'g.80&10&5%
" After Weaving...80&10%
Cut Pieces.....65&5%

NIPPERS.

End Cutting.
Stubb's Pattern. Ins. 5½ 6
Per dozen $4.00 $4.25

End and Diagonal Cutting.
Swedish Side.....75%
Utica Drop Forge & Tool Co...60%

Hoof.
Heller's .....40&10%
V. & B.....55-5%

NOZZLES.

Hose.
Genuine Gem.....per doz. $3 15
Magic..... " 3 15
Mystic..... " 2 85

NUTS, HOT PRESSED.

Square Blank.
In. ¼ 5/16 ⅜ 7/16 ½ ⅝ ¾
℔. 9c 7½c 6c 5½c 4½c 4½c 4½c

Square Tapped.
In. ¼ 5/16 ⅜ 7/16 ½ ⅝ ¾
℔. 12c 10c 7½c 6½c 6½c 5½c 5½c
For 5 lb. boxes add ½c per ℔. to above prices.

OILERS.

Chase Pattern.
Brass and Copper.....50%
Zinc 60%

Engineers'
Cannon.....55%
Tin.....per doz. $2.00@$2.25

Machine.
Common .....per doz. $0 50
Copper Plated Steel.. " 85
Malleable Iron.....60, 10&5%
Jappaned.....65@75c

OPENERS.

Box.
Inches..... 10 12 14
Flat...per doz $2.85 3.60 4.15
Round " 2.10 2.25 2.75

Can.
Delmonico.....per doz. $1 30
Never Slip..... " 0 65

Crate.
V. & B..... " 5 75

OUTFITS, COBBLING.

Home.....per doz. $11 50
Economy..... " 4 90
Fireside..... " 10 50

PADLOCKS.

Standard Wrought .....70, 10&5%
Champion 50%
Eureka.....40, 10&5%
Yale .....60&5%

PAILS.

Cream.
14-qt., without Ga....per doz. $2 50
20-qt., " " .... " 3 00
20-qt., with Gauge.... " 3 50

Sap.
10-qt., Galvanized.....per doz. 1 60
12-qt., " ..... " 1 85

Stock
Galvd. qts. 14 16 18 20
Per doz.....$3.50 3.75 4.50 5.00

Water.
Galvanized qts 10 12 14
Per doz $1 50 1.70 1.95

Wood.
Cable, 2-Hoop..... .per doz. $1 70
" 3-Hoop..... " 1 90
Cedar, 3-Hoop..... " 2 85
Standard, 2-Hoop..... " 1 60
" 3-Hoop..... " 1 80

PANS.

Dripping.....60&5%

Fry.
Common.....75&10%
Acme .....70&10%

Roasting.
Paxton.
Nos..... 1 2 3 4
Per doz.. $4 75 $5.75 $6.50 $7.50
Neverburn.. 4.00 4.50 5.50 6.50
Savory No. 200 .....per doz 8.50

PAPER.

Building.
Plain .....per 100 lbs. $1 10
Tarred..... " 1 20
Tarred Felt..... " 1 65
No. 20, Red Rosin .....pr roll 40
No. 30, Red Rosin ..... " 55

Sand and Emery.
Challenge.....50&10%
B. & A.....50%

Wrapping
Drab Floor.....per ℔. 3½c
Rag..... " 2½c

PARERS.

Apple.
Bay State.....per doz. $13 00
Turntable ..... " 6 00
White Mountain .... " 4 75
Reading ..... " 6 50

Potato.
Goodsell's Saratoga 10½ in. doz. 6 50
" " 5 in.. " 5 50

PICKS.

Adze Eye Ore .....65&5%
Drifting and Poll Picks.....70%
Extra Railroad .....70&5%
Surface.....65&5%

PINCERS.

Carpenters', cast steel.

In.	6	8	10	12
Per doz.	$1 80	$2 40	$2 80	$3 50

Blacksmith's 45%
Heller's 40%

PINS.

Clothes.
Common.....per gro. $0 14
Hoyt's..... " 31
U. S..... " 70

Picket.
Fluted 15 in.....per doz. $0 70
" 21 in..... " 1 60
Spiral ..... " 1 90

PIPE.

Conductor.
Territory.
Eastern.....70&10%
Central.....70&2½%
Southern.....65&10%
Western.....65&10%
Southwestern.....60&12½%

Lead.
Full coils.....per lb. 7½c
Cut " ..... " 7½c

Stove.

Acme—In.	5	6	7
Smooth, per jt..	8½c	9½c	10½c
Planished " ..	32 c	33 c	43c
Peerless—Smooth.	7½c	8 c	9½c
Polished	14½c	15½c	18c
Plan'hed	28 c	31 c	35½c

Made-up—In.	5	6	7
Smooth	7½c	8c	9½c

7 to 6 in. Smooth Tapers, pr jt..13c
6 in. Smooth T's..... " ..27c
7 to 6 in. Planished Tapers.....45c

Yale Patent Lock Pipe—Stove.

	5"	5½&6"	7"	7 to 6"
	Cents			
Battle Ax Blue Smooth Steel.	6	6½	7½	8
Double Lock Peerless Blue Smooth Steel.	6¾	7½	8½	8¾
Can't Slip Blue Smooth Steel.	6¾	7½	8½	8¾
Duplex Polish'd Blue Smooth Steel.....	8¾	9½	10½	10¾
Yale Russia Fin	15¾	16½	17½	17¾
Plan'h'd Dupl x	29½	30½	37	38
Galvano, Galvanized Iron..	15	16	17	17½

If wanted made up, add per joint for grooved, 1c; riveted, 1½c. Crating made-up pipe extra.

Wrought Iron Gas Pipe
⅛@¼-in., black.....discount, 60%
⅜@½-in. ..... " 60,10&5%
¾-in. to 6-in.. black... " 70%
7 " 12 " .. " 62½%
⅛@¼ galvanized " 42%
⅜@½ " " 50%
¾ " 6 " " 57½%
7 " 12 " " 45%

PLANES.

Sargent Iron Bench.....60&10%
Stanley Iron Bench.....25&10%

PLANTERS.

Corn.
Monitor.....per doz..$7 75
Triumph..... " .. 6 00
Segment..... " .. 9 00

Potato.
Acme.....per doz..$6 25
Challenge..... " ..11 00
Pingree..... " .. 2 25
Eureka ..... " .. 6 25

PLATES, TIN.

See Metals in Column 1.

PLIERS.

Button's—In.	4½	6	8	10
Per doz.....	$2.40	$2.80	$3.70	$4.60

Button's Pattern.

In.	4½	6	8	10
Per doz.....	$2.00	$2.40	$3.00	$4.00

Cutting.
Bernard's.....30%
Lodi.....50%

End and Diagonal Cutting.
Swedish Side 70%
Utica Drop Forge & Tool Co....50%

Fencing.
Farmers' Choice....per doz ..$8 00
Russell's..... " .. 8 25

Flat and Round Nose.
Bernard's.....30%
German 65%
Lodi.....50%
Paragon.....50%

Gas—In.	6	8	10	12
Per doz...	$2 35	$3.00	$4.00	$5.00

Tinner's.
Hollow.... .....40%
Solid..... each..5½c

PLUMBS AND LEVELS.

Common.....75%@75&10%
Cook's.....40%
Davis' Iron.....25%
Davis' Inclinometer.....15%

Stanley's.

Nos.	00	0	2	3
Per doz..	$4.50	$5.00	$7.25	$8.40
Nos.	30	25	50	35
Per doz.	$12.00	$17.00	$17.00	$12.00

POINTS.

Drive Well Points.....75&10%

POKERS—STOVE.

Wr't Steel, str't or bent, pr doz.$0.55
Wr't Steel, wood hand'ls " " .80
Nickel pl'td, coil hdl's.. " " .65

POKES—ANIMAL.

Brown's, wr't steel, per doz.$5.00@6.00

POLISH.

Metal.
Pride of the Bar.....$1.60
Putz Cream.

Pts.	1-6	½	¾
Per doz.....	$0.80	$1.10	$1.65

Pts.	1	2	4	8
Per doz	$3 75	$4.50	$7.50	$12.50

White Silk half pints, per doz.$2.00
White Silk, 6 oz. cans, per doz. 1.00
Wondershine

Pts.	1-6	½	1	2
Per doz.....	$0.70	$1.35	$2.25	$3.00

George William Hoffman.
U. S. Metal Polish Paste, 3 oz. boxes, per doz., 50c; pr. gro ..$4.55
½-lb. boxes, per doz..... 1.20
1-lb. boxes, per doz..... 2.25
U. S. Liquid, 8 oz. cans, per doz., $1 25; per gro..... 12.00
Barkeepers' Friend Metal Polish, per doz., $1.75; per gro..18.00

Shoe.
M. D. C.....per doz. 36c@50c
F. C. O..... " 40c
T. M..... " 55c@$1.75
Imperial.....per gr.....$5.00

Stove.
Black Eagle, 1 lb cans. pr gr..$15.00
Black Silk—
5 lb. pail.....$0 70
Paste, 5 oz. cans....per doz. 75
Paste, ½ lb. cans.... " 1 00
Liquid, ½ pint cans..per doz $1 00
Liquid, 6 oz. cans... " 75
Steel Range Gloss.... " 1 75
Blackene, 1 lb cans....pr gro. 13 00
Black Jack, ¾ lb cans.. " 9 25
Dixon's Carb. of Iron.. " 5 75
Nickel Plate..... " 4 50

POPPERS, CORN.

Round or Square, 1 qt. per dz. ..$ 95
Square, 1½ qt..... " 1 10
Square, 2 qt..... " 1 25
2 qt. Reversible..... " 1 60

POTS, FIRE.

Bernz.....each $3 85
Clayton & Lambert's, ea..$4 75@6 25
Gate City.....each 6 25
Gem.....ea..$6 75@8 50

POWDER.

See Ammunition.

PRESSES, FRUIT AND JELLY.

Enterprise Manufacturing Co....25%
Henis .....per doz. $2 00

PRIMERS.

See Ammunition.

PRUNERS.

Disston's Pole.....per doz. $6 50
Henry's Improved..... " 75&10%
Water's Improved..... " 80&5%

PULLERS.

Cork.
Daisy.....each $3 10
Phoenix..... " 1 40
Quick and Easy..... " 2 70

Nail.
Giant.....per doz..$10 50
Blackhawk..... " .. 6 50
Morrill's ..... " .. 10 50

Tack—Giant ..... " .. 40

PULLEYS.

Awning—Jap'd.....60%
Clothes Line.....50&10%
Hay Fork.
Iron Wheel, 5 in.....per doz. $1 75
Wood Wheel, 6 in.... " 1 75
Wood Wheel, 6 in.. pass knot..... .... " 2 15
Hot House—Jap'd .....50&10%
Screw..... " 60%
Side ..... " .....50&10%
Sash.
Clark's .....per doz $0 36
Common Sense, 2 in .. " 22
" Pattern, 2 in.. " 30
Empire..... " 30
Ideal..... " 30
Steel..... " 30

PUMPS

Pitcher Spout.

Nos.	1	2	3	4
Each	$.90	1.00	1.10	1.40

Spray.
Blizzard.....per doz. $14 50
Cyclone, tin..... " 3 40
" copper .... " 6 75
Daisy..... " 9 00
Little Giant.....each 2 25

PUNCHES.

Conductors'.
No. 22.....per doz. $2 25
Machine.....per lb. 19
Saddlers'.
Common.....per doz. 60c@70c
Good..... " 72c@84c

PUTTY.

In Bladders.
Strictly pure.....per 100 lbs. 2 35

RAIL.

Barn Door.
Crescent T..... 4½c
Double Flange..... 2½c
Matchless, 1 in..... .... 3c
Matchless, 1½ in 3½c
Storm King..... 4c
World's Best 7c
Sliding Door.
Painted steel.....per ft. 4½c
Bronzed wrought iron... " 8½c

RAKES.

Coal or Wood.....per doz. $5.20
Garden.
Steel.....75&10%
Steel, bow.....75&7½%
Malleable Iron, heavy.....70&10%
Hay.
Wood.....$1.50@$3 00
Lawn—Wood.
XXX .....per doz. 3 00
Automatic ..... " 6 00
Hustler ..... " 3 50
Jumbo, 36 teeth..... " 6 00

RASPS—See Files.

RAZORS.

Bo-ras-ic 50%
Red Devil.....50%
Tree Brand.....50%

REGISTERS.

List December 5, 1904.

Black and White Japanned.....70%
Nickel Plated.....70%
Electroplated, Brass, Bronze or Copper.....70%

RINGS

Bull.

Copper.....	2½ in	3 in.
Per doz.....	$1.10	$1.35

Rea's Impro'd Self Piercing

copper, pr d'z.	1.85	
Steel per doz..	.85	.95
Nickel Plated	1.35	...

and Ringers—Hog.
Blair's Rings.....per doz. $0 45
Blair's Ringers..... " 60
Brown's Rings..... " 50
Brown's Ringers..... " 80
Champion Ringers... " 1 60
Hill's Ringers..... " 45
Hill's Ring, boxes..... " 40
Major Rings ..... " 60
Perfect Ringers..... " 80
Wolverine Rings..... " 1 30
Wolverine Ringers... " 60
Fruit Jar.
White.....per lb 30c
Key.
Split, round.....per doz. 17c
Split, square..... " 22c
Ball, Round..... " 32c

RIVETS.

and Burrs.
Copper Belt 40%
Coppered Iron 75%
Tinners' 70%
Hame .....per lb. $0 10
Slotted Clinch.....per doz. 40c@45c
Tubular.
Nos. 1 and 2 assorted sizes, doz. 45c

RIVET SETS.

See Sets.

ROPE.

Cotton.
¼, 5-16-in. Com. on reels..per lb. 11½c
¼, 5-16-in. Com. in coils .. " 12c
¼, 5 16 Imperial in coils . " 21c
Sisal
Rates.....10½c
Premier, rates .....per lb. 8½c
Pure Manila.
Rates..... " 13½c
Premier, rates .... " 12½c

RULES.

Boxwood.....70%
Ivory .....45&5%

SASH WEIGHTS.

See Weights.

SAWS.

Back.
Atkins'.....40%
Disston's .....30&5%
Jackson's.....30&5%
Butchers'.
Atkins' Nos. 1, 2, 3, 5, 7..... ..40%
Atkins' Nos. 77, 78.....60%
Atkins' No. 79.....50&5%
Disston's.....40&5%
Circular.
Atkins'.....50%
Disston's.....50%
Hiles'.....50&10%
Compass.
Atkins' Nos. 2 & 3 .....40%
Atkins' Nos. 4 & 5.....40&10%
Common.....per doz. $1.35@$1.60
Disston's.....25&7½%
Cross-Cut.
Atkins'.....35&40%
Disston's.....40&10% &50%
Dehorning.
Atkins'.....per doz. $5 50
Disston's..... " 5 75
Hack.
Atkins'.....40%
Disston's.....25%
Keystone.....30%
Hand and Rip.
Atkins'.....40%
Brown's .....30&7½%
Disston's No. 7.....35&5%
Disston's Nos. 8, D8, 12, 75, 112, D100, and 120.....30&5%
Keystone.....35&5%
Enterprise, hand.....per doz.$5 00
Our Saw, hand..... " 4 00
Our Saw, rip..... " 4 50
Keyhole—Disston's.....30&5%
Atkins' No. 5.....40&10%
Atkins' No. 6.....40%
Kitchen.
Atkins' .....50&10%
Sterling.....25%
One Man 50%
Panel.
Atkins'.....40&10%
Brown's.....30&7½%
Disston's No. 7.....25&5%
Disston's No. D100.....30&5%
Pruning.
Atkins' Nos. 1, 2 & 3.....35%
Atkins' Nos. 5, 6 & 7.....40%
Brown's.....25&7½%
Disston's.....30&5%
Wood.
Atkins'.....40&10%
Common.....per doz. $4 50
Forest Clipper..... " 5 00
Happy Medium..... " 7 00
Perfection ..... " 8 00
Crescent..... " 5 00

SAW BUCKS—See Bucks.

SAW SETS—See Sets.

SAW TOOLS—See Tools.

SAW FRAMES.

Common, plain.....per doz. $1 25
" painted.... " 1 70

SCALES.

Counter.
Pelouze..... .....40&10%
Platform.
Osgood.....50%

SCOOPS.

Grain.
½ Bu. "Hercules,"..per doz. $13 75
1 " " " 15 00

SCRAPERS.

Box.
Stanley's Adjustable, per doz.$3 00
Triangular..... " 4 00
Cabinet.
Cast Steel..... " 60c@75c
Stanley's No. 80..... " $7 80
Road.

Cubic ft.	7	5	3
Without runners, ea.	$4.00	3.75	3.50
With runners.... "	4.25	4.00	3.75

SCREWS.

Bench.

Iron, in,.....	1	1½	1½
	$3.25	$3.75	$4.50

Wood, white maple..per doz. $3 50
Hand—Wood.....30%
Hand Rail.....80&10%
Jack .....70&10&10%
Lag or Coach—all sizes, gimlet pointed.....75&5%
Saw—Centennial.

Nos.	1	2	3	4	5	6
Per doz.	18c	20c	26c	30c	23c	25c

Wood.
F. H. Bright.....87½&10&10%
R. H. Blued.....85&10&5%
F. H. Jap'd.....82½&10%
F. H. Brass.....85&10&5%
R. H. Brass.....80&10&5%
R. H. Nickel Plated.....80%

SCYTHES.

Clipper, grain.....per doz. $9 50
Clipper, grass..... " 7 75
Vulcan..... " 7 25
Honest Dutchman..... " 7 00
Challenge..... " 8 00

SHAVING SETS.

Smith & Hemenway.....60%

LIFTS.

Nail.
Round, common.....per doz. $0 33
Square, " ..... " 42
Octagon " ..... " 33
Square, Triumph.... " 90
Cup Point, knurled, pr. doz. 90c@$1.00

Rivet.
Farmers'.. .....per doz. $1 20
Tinners'.....50&10%

Saw.
Aiken's Pattern.....per doz. $3 50
Common Lever..... " 1 20
Disston's Monarch... " 6 50
" X Cut..... " 12 00
German ..... " 1 05
Morrill's Old Style... " 5 00
" Pattern.... " 3 75
Leach's..... " 4 80
Nash's Hand..... " 3 15
" X Cut..... " 4 20
Stillman's Lever..... " 1 30
" X Cut..... " 2 50

SHARPENERS, SKATE.

Diamond.....per doz. $1 60
Smith & Hemenway.....20%

SHAVES, SPOKE.

Iron.....per doz. $1.35@$2.75
Wood..... " 2.75@ 4.75
Bailey's.....50&5%
Goodell's.....15%
Stanley's Universal.....30&5%

SHEARS.

Pruning.
Buckeye, No. 1.....per doz. $5 75
" No. 2..... " 7 40
California Pat., 9 in.. " 3 20
" " 10 in.. " 4 00
Draw Cut, No. 3..... " 13 75
" " No. 4..... " 16 50
Henry's Pat. 0 01 14 012
Per doz.....$1.40 $2.10 $2.90 $2.80
Star.....per doz. $4.00

Sheep—No. BBA.
Inches..... 6 6½ 7
Reg. Grip..... $11.25 $11.50 $12.00
Nar. Grip, doz. 11.00 11.25 12.25

Tinners'—See Snips.

SHEAVES, SLIDING DOOR.

Common.
Inches..... 3 4 5
Per set..... $0.34 $0.42 $0.70

Hatfield's.
Per set..... .75 1.00 1.60

SHELLS—See Ammunition.

SHELLERS, CORN.

Union..... per doz. $6.75

SHIELDS.

Expansion Bolt Shields.....50&10%

SHOES.

Conductor .....60&10%

SHOE POLISH—See Polish.

SHOT—See Ammunition.

SHOVELS AND SPADES.

Coal.
No. 2 Woodford .....per doz. $5 50
No 182. ..... " 6 00
Ames' new list.....Discount 12½%

Per Doz.
Neverbreak, hollow bck, blk. $15 75
National.... " " " 14 75
Buckeye .... " " " 10 00
Mohawk.... " " " 9 00

Drain.
Iwan's Perfection.....50%

Railroad, Etc.
Black Diamond .....per doz $10 50
Crescent..... " 5 75
Keystone..... " 8 75
Star..... " 4 75
Vaterland..... " 9 50
Hollow Back..... " 4 75
Ames' new list.....Discount 12½%

Snow.
Per doz.....$1.65@$9.00

Alaska Steel.
D Handle.....per doz. $3 50
Long Handle..... " 3 00

SINKS.

Cast Iron.
Painted..... 60%
Enameled, White.....65%

Wrought Steel.
Painted, new list.....40-10&5%

SLEDGES—See Hammers.

SNAPS, HARNESS.

Champion.....33⅓%
German Pattern.....30&5%
Judd's Pattern.....50%

SNATHS.

Double Ring, Bush.....per doz. $5 50
Patent Loop " .... " 5 75
" " Grass..... " 5 25

SNIPS, TINNERS'.

Heinisch's.....40&5%
National.....40&10%

SOLDER—See Metals.

SPRINGS, DOOR.

Perfect.
Nos..... 1 2 3 4
Per doz.... 30c 35c 40c 45c

Reliance.
Per doz.....light $1.25; heavy $2.50

Star.
Per doz..... light 90c; heavy $1.35
Torrey's.....per doz. $1.35
Warner's No..... 11 13
Per doz..... 75c $1.35

SQUARES.

Steel and Iron..... .....70&10%
(Add for Bluing, $2.50 per doz., net)

Mitre.
Stanley's No. 12.....60%

Try.
Stanley's No. 20, new list...45&10%
" No. 12 and 14.....55%

Try and Bevel.
Stanley's ....55&5%

Try and Miter.
Fox's.....per doz. $5.75
Winterbottom s.....70%

SQUEEZERS, LEMON.

Common Wood.....per doz. $0 70
Porcelain Lined, Wood. " 1 25
Boss, malleable iron.... " 75
Iron Frame, p'rel'n bowl " 2 25
" glass bowl... " 2 50
Little Giant, tin'd iron. " 4 00
Drum, japanned..... " 3 60
Drum, nickel plated .... " 4 50

STAPLES.

Blind.
Barbed.....per ℔ 9½@9½c

Butter Tub..... " 8@8½

Fence—less than carload.
Polished.....per 100 ℔ $2 30
Galvanized..... " 2 60

Netting.
Galvanized..... ...per 100 ℔ 4 00

Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.....85&10%
Extra heavy..... .....85%

STEELYARD.

Discount 25%

STONES.

Axe.
Hindostan.....per ℔ 5½@7c
More Grit..... " 9½c
Washita ..... " 17 c

Emery.....60%@60&5%

Oil—Mounted.
Arkansas Hard.....per doz. $23 00
Arkansas Soft..... " 15 50
Hindostan .....per ℔ 6½@6½

Oil—Unmounted.
Arkansas Hard.....per ℔ $2 05
Arkansas Soft..... " 1 10
Lily White..... " 45
Queer Creek..... " 15
Ouachita..... " 38
Washita ..... " 26

Sythe.
Black Diamond.....per gro. $8 00
Crescent..... " 4 25
Gem Corundum..... " 7 50
Green Mountain..... " 4 50
La Moille ..... " 7 00
Quinnebog..... " 5 00
Red End..... " 3 75

STOPS, BENCH.

Hotchkiss'.....per doz. $3 50
Stearns'..... " 4 75

STOPPERS, FLUE.

Common.....per doz. $0 40
Crown ..... " 45
Gem, flat, painted..... " 85
Gem, cor'd, decorated.. " 70
Kirch's..... " 90
Perfect..... " 70@85
Skinner s Common Sense " 80

STOVE PIPE—See Pipe.

STOVE BOARDS—See Boards.

STOVE POLISH—See Polish.

STRAPS.

Scoop.....per doz. prs. $1 85
Skate..... " " 60@70c

STRETCHERS.

Carpet.
Bullard's.....per doz. $3 90
Excelsior..... " 5 25
Malleable Iron..... " 70
Perfection..... " 6 30
King..... " 4 50

Wire.
N. S. Elwood's..... " 6 00
O. S. Elwood's..... " 6 00
Little Giant..... " 5 75
Safety ..... " 10 00
Star Lever..... " 6 25
Star Tackle Block.... 9 50
Warner's..... " 6 25

SWIVELS.

Malleable Iron.....per ℔ 6½c
Wrought Steel.....per gro. $4 50

TACKS.

American Cut.....90&5%
American Wire.....85&25&10%
Bill Posters Cut.....90&30%
Blued Carpet.....90&10%
Tinned Carpet.....90&10%
Gimp.....90&10%
Upholsters' Cut .....90&33⅓%
Upholsters Wire.....90&10%
Double Pointed..... .....90&20%
Copper.....per ℔ 32c
Canvas Nails.....75&5%
Clout Nails .....75&5%
Hungarian Nails .....80&5%

TAPES, MEASURING.

Asses' Skin.....40&5%
Bend Leather.. .....20%
Patent Leather.....20%
Lufkin's Steel.....25%
Lufkin's Metallic 30%

TEE BEVELS—See Levels.

THERMOMETERS.

Tin Case.....per doz 80c@$1 25
Wood Back..... " $2.00@12 00
Glass..... " 12 00

TIES.

Bale.
Single Loop.....80&10%
All other kinds.....70%

Cow—See "Chains."

TOOLS, SAW.

Atkins' Dexter.....per doz. $4 50
Atkins' Excelsior..... " 6 50
Disston's Universal.....40%

Minature.
Smith & Hemenway 25%

TRAPS.

Fly.
Balloon.....per doz. $1 15
Harper's..... " 1 25

Game.
Newhouse.....40&10%
New Victor.....70&10%

Mole.
Reddick's.....per doz. $6 00

Mouse and Rat.
Wood Choker...per doz. holes $0 10
Tin Choker..... " " 10
Delusion..... .....per doz. 1 00
Marty Rat..... " 6 00
Marty Rat Imitation.. " 3 50
Marty Mouse..... " 3 00
Marty Mouse Imitation " 2 00

TROWELS.

Brick.
Standard.....40%
Brade's.....15&5%
Disston's.....30%
Rose's.....25%

Plasterers.
Standard 40%
Disston's.....25%
W. & McP.....25%

TRUCKS.

Bag.....each $2 75
Handy..... " 1 85
Warehouse.....50&10%

No	1	2	3
Half Ironed	$3.00	$3.85	$5.50
Full Ironed	3.45	4.50	6.45

TUBS, WASH.

Standard.				Ex.
Nos	3	2	1	large
Per doz	$5.00	$6.00	$7.00	$ 9.50
Dowell.				
Per doz	5.35	6.35	7.00	9.50
Cedar.				
Per doz	6.10	7.10	7.90	10 80
Indurated.				
Per doz	8.55	9.45	10.80	13.50
Galvanized.				
No	1	2	3	
Per doz	$4.85	$5.75	$6.50	

TWINE.

	Per ℔
3-ply Cotton Wrapping	25c
4 " " "	25c
4 " " Extra Wrapping	27c
4 " " Hvy. Wrapping	25c
4 " " Wrapping on tubes	23c
3 " " " cones	25c
4 " " " "	25c
India Hemp, ¼-lb. balls	17c
" " ½-lb. "	16c
" " ¾-lb. " .....doz.	63c
2-ply " ¼-lb. "	11c
3-ply " ½-lb. "	10c
Jute Wrapping, ½-lb. balls	14c
Jute Wool, 1-℔. balls	8½c

Seine.

Nos	9	12	15+
Soft.....per ℔	26½	26	25
Med..... "	26½	26	25
Hard .... "	27	26½	26

Staging, ¼-lb. ball, size 21.....26½c
" " " " 24.....26c
" " " " 27.....26c
Bagging " " 23c
3-ply "B" in hanks.....18c
4 " "B" " 18c
3 " "A" " 27c
3 " Silver Finish, in hanks....37c

Fodder or Lath.
130-strand 6½c
200 strand. 7½c

VISES.

Phoenix.....35%
Cheney's 20%
Parker's Oval Slide.....50, 10&2½%
Sargent's Oval Slide,

In.	2½	3	3½	4½
Ea.	$1 00	$1 25	$1 65	$2 00

Parker's Parallel.....18&20%
Parker's Victor.....15%
Parker's Combination.....75%
Solid Box.....50%
Adam's Mechanics'.....each 2 50
Williamson Universal.....60%

WARE.

Stove Hollow Ware.
Plain or Unground 60%
Ground Ware.....50&10%
Enameled Ware.....50%

Country Hollow Ware, per 100 lbs $2.75

White Enameled Ware.
Maslin Kettles.....60&10&10&5%

Covered Ware, Tinned and Turn'd. 40%
Enameled 50%

Glue Pots, Tinned.....30%
Enameled.....35%

Enameled.
Cherry Blossom and Chrysolite.50%

WASH BOARDS—See Boards.

WASHERS.

Standard O. G. cast iron ..per ℔. 2½c

Wrought iron in bulk per ℔.:

In.	½	⅝	¾	⅞	1	1¼	1½
	9c	6½c	5c	4½c	4½c	4½c	3½c

Wrought steel in 5 ℔. boxes, per ℔.

In.	½	⅝	¾	⅞	1
	10c	7c	6c	5½c	5c	5c	4½c

WASHING MACHINES—See Machines.

WEDGES.

Ax.....per doz....30
Galling ....per ℔ 10½
Saw ..... " 8½

WEANERS.

Calf.
Fuller's, per doz.....$2 00 to $2 50
Tyler's Safety, per doz 1 85 to 2 40
Carroll's, per doz ..... 3 00 to 3 75
Standard, per doz..... 3 00
Hoosier, per doz..... 3 50 to 4 60

WEIGHTS.

Hitching ....per ℔ 2½c
Sash—F.O.B. Chicago...pr ton $24 50

WHEEL BARROWS.

Common Railroad....per doz..$15 50
Heavy " .... " .. 20 00
Panama Steel Tray " .. 35 00
Klondike " " .. 23 50
No C4 Tubular " 43 Bryan..each 4 60
No. C5 " " 45 " " 5 25

WHEELS.

Corundum .....70&10&5%
Emery .....75&5%

Well	In.	8	10	12	14
Per doz		$2.10	$2.50	$3.15	$5.00

WIRE.

Barbed	Painted.	Galv'd.
Carloads..per 100 lbs..	$2.30	$2.60
Less than car " ..	2.35	2.65

Brass.
In coils.....20%
In 1 ℔ spools, new list.....50&10%

Broom—Tinned.....60&10&10&10%

Cable—Same price as Barbed Wire.

Copper.
In coils.....20&10%33⅓%
In 1 ℔ spools, new list 50&10%

Fence—Smooth.
Nos. 6 to 9, An'eal'd, pr 100 lbs. $2.10
Nos. 6 to 9, Galvl'd... " 2.40

Hair—New list.....50&10%

Market.
Bright, full bdles.....70&10%
Bright, broken bdles.....70%
Coppered, full bdles . .. 70%
Coppered, broken bdles.....65&10%
Tinned, full bdles..... 70&5%
Tinned, broken bdles.....65&10%

Picture—In coils.....80%@80&10%
In 5 ℔. spools .....per ℔..26c

Plain—Small lots..... $2.10
Car lots 2.05
Small spools 5c per hundred higher.

WRENCHES.

Acme Standard.....60%
Alligator .....75&10%
Always Ready.....50&10%
Bemis & Call No. 2 Improved Pipe Wrenches 80%
Coe's Standard.....40&10&5%
Agricultural.....75&10%
Ellis Adjustable.....25%
Malleable "S".....per ℔. 06c
Malleable..... " 06c
Stillson Pipe 70%
Trimo " .....65&10%

WRINGERS.

No. 22, Guarantee....per doz.$32 00
No. 110, Guarantee.... " 32 00
No. 110, Brighton..... " 22 00
No. 110, Bicycle ..... " 31 00
No. 500, Royal . ..... " 32 00
No. 350, Universal.. " 27 00
No. 300, Novelty.... " 27 00
No. 310, Keystone.. " 27 00
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Garry Iron & Steel Co., Cleveland, O
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Richards Mfg. Co., Aurora, Ill
Safety Door Hanger Co., Ashland, O

Hangers—Garment

Pullman Mfg. Co., Rochester, N.Y

Hardware Jobbers

Clark, Quien & Morse, Peoria
Paxton & Gallagher Co., Omaha

Hardware Specialties

Bishop Hdw. Co., Dowagiac, Mich.
Carver File Co., Philadelphia, Pa
Kees Mfg. Co., Beatrice, Neb

Heaters—Steam and Hot Water

Haynes-Langenberg Mfg. Co., St. Louis
Kellogg-Mackay-Cameron Co., Chicago and Kansas City
Magee Furnace Co., Chicago
Monroe Fdy. & Furn. Co., Monroe, Mich
Mueller, L. J. Furn. Co., Milwaukee, Wis

Heater Combination
Stoix, F. D., Chicago, Ill

Hinges
Griffin Mfg. Co., Erie, Pa
Koes Mfg. Co., Beatrice, Neb
Lawson Mfg. Co., Chicago, Ill

Hollow Ware
Avery Stamping Co., Cleveland, O
Sperry, D. R. & Co., Batavia, Ill

Ice Cream Freezers
North Bros. Mfg Co., Philadelphia, Pa
Richmond Cedar Wks., Richmond, Va

Industrial Plants
Vollkommer & Co., Pittsburgh, Pa

Iron Fence
Stewart Iron Works, Cincinnati, O

Kitchen Utensils
Avery Stamping Co., Cleveland, O
Lalance & Grosjean Mfg. Co., Chicago

Ladders
Calander, John, St. Paul, Minn

Lanterns
Berger Mfg. Co., Canton, O
Pritchard-Strong Co., Rochester, N. Y

Lawn Mowers
Briscoe Mfg. Co., Detroit, Mich
Clipper Lawn Mower, Dixon, Ill

Levels
Baker-McMillen Co., Akron, O
Stanley Rule & Level Co., New Britain, Ct

Lighting Systems
Ideal Epworth Acetylene Co., Johnstown, Pa.

Lightning Rods
Maher & Sons, Preston, Ia
Security Lightning Rod Co., Burlington, Wis

Mail Boxes
Blick-Williams Co., Indianapolis, Ind
Heise & Brauer, Chicago, Ill
Signal Mail Box Co., Joliet, Ill
Smith Bros. Mfg. Co., Chicago, Ill
Peck, C. A. Hdw. Co., Berlin, Wis

Metal—Perforated
Harrington & King Perforating Co., Chicago, Ill

Metal Polish
Hoffman, Geo. W., Indianapolis, Ind

Metal Shingles
Burton, W. J. Co., Detroit, Mich
Edwards Mfg. Co., Cincinnati, O
Cortright Metal Roofing Co., Philadelphia
Nat'l Sheet Metal Roof. Co., Jersey City

Miters
Whitacre Mfg. Co., J. R., Rockford, Ill

Mop Wringers
Eagle Cooperage Wks., Circleville, O

Nails and Tacks—Copper
Hungerford, U. T., Brass & Copper Co., New York

Nickel Trimmings
Troy Nickel Works, Troy, N.Y

Nuts
American Lock Nut Co., Oregon, Ill
Columbus Bolt Works, Columbus, O
Garland Nut & Rivet Co., Pittsburgh, Pa

Oil Cans
Cooney & Geiger, Indianapolis, Ind

Oars
Strand & Youngquist, Minneapolis

Paints
Dixon, Jos. Crucible Co., Jersey City, N. J
Enterprise Paint Mfg. Co., Chicago
Heath & Milligan, Chicago, Ill

Pencils
Dixon, Jos. Crucible Co., Jersey City, N.J

Perforated Metal
Harrington & King Perforating Co., Chicago, Ill

Photograph Clips
U. S. Clothes Pin Co., Montpelier, Vt

Pistols
Stevens, J. Arms & Tool Co., Chicopee Falls, Mass

Planes
Stanley Rule & Level Co., New Britain, Ct

Pumps
Beckman Bros., Des Moines, Ia
Berger Mfg. Co., Canton, O
Voss-Snyder Co., Massillon, O

Punches
American Lock Nut Co., Oregon, Ill
Bertsch & Co., Cambridge City, Ind
Diener, Geo. W. Mfg. Co., Chicago
Globe Mch. & Stamp. Co., Cleveland, O
Niagara Mch. & Tool Wks., Buffalo, N.Y
Weiss, H. & Co., New York, N.Y

Radiators
Sterling Air Radiator Co., Chicago

Ranges
Beckwith, P. D. Estate, Dowagiac, Mich
Champion Steel Range Co., Cleveland, O
Co-operative Fdy. Co., Rochester, N.Y
Foster Stove Co., Ironton, O
Kontny, John, Chicago, Ill
Pittsburg Stove & Range Co., Pittsburg, Pa

Rasps
Disston, Henry & Sons., Philadelphia, Pa

Razors
Gillette Sales Co., Times Bldg., New York City
Smith & Hemenway, Corp, Ltd. New York

Registers
Auer Register Co., New York
Ferro Steel Co., Cleveland, O
Henry & Scheible Co., Cleveland, O
Independent Steel Register Co., Cleveland, O
Mueller, L. J., Furn. Co., Milwaukee, Wis
Schwab & Sons Co., Milwaukee, Wis

Rifles
Stevens, J. Arms & Tool Co., Chicopee Falls, Mass

Rivets
Hungerford, U. T., Brass & Copper Co., New York, N. Y

Roasters—Poultry
Lisk Mfg Co., Canandiagua, N. Y

Roofing
Johns-Manville, H. W. Roofing Co., New York, N. Y
Niles Corrugating Co., Niles, O

Roofing—Asphalt
Stowell Mfg. Co., Jersey City, N.J

Roofing—Iron and Steel
Berger Mfg. Co., Canton, O
Burton, W. J. Co., Detroit, Mich
Canton Art Metal Co., Canton, O
Edwards Mfg. Co., Cincinnati, O
Follansbee Bros. Co., Pittsburgh, Pa
Friedley & Voshardt, Chicago, Ill
Garry Iron & Steel Co., Cleveland, O
La Crosse Steel Roof. Co., La Crosse, Wis
Nat'l Sheet Metal Roof. Co., Jersey City
Schoedinger, F. O., Columbus, O

Roofing Cement
Connors, Wm. Paint Mfg. Co., Troy, N.Y
Garry Iron & Steel Co., Cleveland, O

Roof Paint
Conners, Wm. Paint Mfg. Co. Troy, N.Y
Dixon, Jos. Crucible Co., Jersey City, N.J
Garry Iron & Steel Co., Cleveland, O

Rules
Lufkin Rule Co., Saginaw, Mich
Stanley Rule & Level Co., New Britain, Ct

Safety Razors
Gillette Sales Co., Times Bldg., New York City

Sanitary Pails
Weber-Kirch Co., Keokuk, Ia

Sash Balances
Pullman Mfg. Co., Rochester, N.Y

Sash Chain, Ribbon & Wire Cord
Pullman Mfg. Co., Rochester, N.Y

Saws and Saw Sets
Atkins, E. C. & Co., Indianapolis, Ind
Diamond Saw & Stamping Co., Buffalo, N. Y
Disston, Henry & Sons, Philadelphia, Pa
Goodell-Pratt, Greenfield, Mass

Scales
Beckman Bros., Des Moines, Ia

Screens—Perforated Metal
Harrington & King Perforating Co., Chicago, Ill

Screen Door Checks
Pullman Mfg. Co., Rochester, N. Y

Screens—Radiator
Harrington & King Perforating Co. Chicago, Ill

Screws
Columbus Bolt Works, Columbus, O

Screw Drivers
North Bros. Mfg. Co. Philadelphia, Pa

Scuttle Openers
Bickelhaupt, G., Skylight Works, New York, N. Y

Seamless Tubing—Brass & Copper
Hungerford, U. T., Brass & Copper Co., New York

Settees—Iron
Stewart Iron Works, Cincinnati, O

Shears—Sheet Metal
Bertsch & Co., Cambridge City, Ind
Niagara Mch. & Tool Wks., Buffalo, N.Y
Weiss, H. & Co., New York, N.Y

Sheet Metal Specialties
Friedley & Voshardt, Chicago, Ill

Sheets—Black and Galvanized
Berger Mfg. Co., Canton, O
Parkersburg Iron & Steel Co., Parkersburg, W. Va
Wheeling Corrugat'g Co., Wheeling, W. Va

Sheets—Planished
Ward-Dickey Steel Co., Indiana Harbor, Ind

Sheets—Steel
American Sheet & Tin Plate Co. Pittsburgh, Pa
Parkersburg Iron & Steel Co., Parkersburg, W. Va
Ward-Dickey Steel Co., Chicago, Ill

Shelving—Hardware
Heller & Co., Mont Clair, N. J

Shot Guns
Stevens Arms & Tool Co., Chicopee Falls, Mass

Shovels
Avery Stamping Co., Cleveland, O

Sifters
Stuber & Kuck, Peoria, Ill

Skylights
Edwards Mfg. Co., Cincinnati, O

Skylight Gearing
Bickelhaupt, G., Skylight Works, New York, N. Y
Weiss, H. & Co., New York, N.Y

Slate
Auld & Conger Co., Cleveland, O
Johnson, E. J. & Co., New York, N.Y

Soldering Furnaces
Clayton & Lambert Mfg. Co Detroit
Turner Brass Co., Chicago, Ill

Sporting Goods
Cycle Skate & Spt. Goods Co., New York
Enterprise Mfg. Co., Akron, O

Squares, Machinists'
Disston, Henry & Sons, Philadelphia, Pa
Duby & Shinn, New York City, N.Y
Stanley Rule & Level Co., New Britain, Ct

Stampings—Sheet Metal
Avery Stamping Co., Cleveland, O

Steel Roofing
Garry Iron & Steel Co., Cleveland, O
Niles Corrugating Co., Niles, O
Merchant & Evans Co., Philadelphia, Pa

Stoves and Ranges
Beckwith, P. D. Estate, Dowagiac, Mich
Champion Steel Range Co., Cleveland, O
Channon Emery Co., Quincy, Ill
Comstock-Castle Co., Quincy, Ill
Co-operative Fdy. Co., Cleveland, O
Foster Stove Co., Ironton, O
Pittsburgh Stove & Range Co. Pittsburgh, Pa
Ringen Stove Co., St. Louis, Mo
Shendan Stove Mfg. Co., Quincy, Ill
White, Thos. Stove Co., Quincy, Ill

Stoves—Gas
Howes, S. M. Co., Boston, Mass
Pittsburgh Stove & Range Co., Pittsburgh, Pa

Stove Casters
Kramer Bros. Fdy. Co., Dayton, O

Stove Cement
Dixon, Jos. Crucible Co., Jersey City, N.

Stove Clay
Bridgeport Crucible Co., Bridgeport, C

Stove Mats
Stuber & Kuck, Peoria, Ill

Stove Pipes
Edwards Mfg. Co., Cincinnati, O
Hemp & Co., St. Louis, Mo
Wheeling Corrugat'g Co., Wheeling, W. Va

Stove Patterns
Cope Pattern Wks., Detroit, Mich
Shaw & Keller, Cleveland, O
Quincy Pattern Co., Quincy, Ill
Vedder Pattern Works, Troy, N.Y
Weller Pattern Co., Quincy

Stove Pipe Thimbles
Stuber & Kuck, Peoria.

Stove Repairs
Braner, A. G., St. Louis, Mo
Manufacturers' Stove Repair Co., Chicago

Stove Trimmings
Troy Nickel Works Troy, N.Y

Stove Trucks
Arcade Mfg. Co., Freeport, Ill

Stump Pullers
Monarch Grubber Co., Lone Tree, Iowa

Sugar Kettles
Sperry & Co., Batavia, Ill

Tapes
Lufkin Rule Co., Saginaw, Mich

Test Tube Holders
U. S. Clothes Pin Co., Montpelier, Vt

Thermometers—Oven
Evans Stamping & Plating Co., Taunton, Mass

Thermostats
Howard Thermo. Co., West Oswego, N. Y

Tin—Perforated
Harrington & King Perforating Co., Chicago, Ill

Tinners' Tools
Lufkin Rule Co., Saginaw, Mich

Tinplate
Canton Art Metal Co., Canton, O
Eller, J. H. & Co. Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Garry Iron & Steel Co., Cleveland, O
McClure Co., Philadelphia, Pa
Merchant & Evans Co., Philadelphia, Pa
Schoedinger, F. O., Columbus, O

Tinware
Lalance & Grosjean Mfg. Co., Chicago
Lisk Mfg. Co., Canandaigua, N. Y
Moshcik, P., Chicago
Roseland Can & Spec. Co., Rockford, Ill
Weber-Kirch Co., Keokuk, Ia

Tools, Etc.
Wiebush & Hilger, New York City

Tree Guards—Iron
Stewart Iron Works, Cincinnati, O

Trowels
Atkins & Co., Indianapolis, Ind
Avery Stamping Co., Cleveland, O
Disston, H. & Sons, Philadelphia, Pa
Griffin Mfg. Co., Erie, Pa

Tubing—Brass and Copper
Hungerford, U. T., Brass & Copper Co., New York

Tubs and Pails
Wheeling Corrugat'g Co., Wheeling, W. Va

Valve Regulators
Howard Thermo. Co., West Oswego, N. Y

Vases—Iron Reservoir
Stewart Iron Works, Cincinnati, O

Ventilators
Canton Mfg. Co., Canton
Friedley & Voshardt, Chicago,
Globe Ventilator Co., Troy, N.Y
Merchant & Evans Co., Philadelphia, Pa
Powers Bros., Streator, Ill
Pullman Mfg. Co., Rochester, N. Y

Wagons
Sycamore Wagon Works., Sycamore, Ill

Wash Boilerf
Reed Mfg. Co., Newark, N. J.

Washing Machines
Benbow-Brammer Mfg. Co., St. Louis, Mo
Paxton & Gallagher Co., Omaha, Neb
Richmond Cedar Wks., Richmond, Va
White Lily Washer Co., Davenport, Ia

Wire Goods
Denning Wire & Fence Co., Cedar Rapids, Ia
Pittsburgh Steel C Pittsburgh Pa

Wants and Sales

For Yearly subscribers THE AMERICAN ARTISAN will insert under this head advertisements of six lines WITHOUT CHARGE for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they read the advertisement in THE AMERICAN ARTISAN.

BUSINESS CHANCES

PATENTS

HUBERT E. PECK, 623 F. St., N. W., Washington, D. C. Consulting Expert in Patent Causes. U. S. and Foreign Patents. Send for leaflet on "Rejected Patent Application."

For Sale—We are closing out our general stock of hardware, including tinshop. Write at once for particulars. Address Geo. B. Fisch, Muscatine, Iowa. 28-3t

For Sale—Hardware implements and buggy business in central Indiana; will invoice about $4,000; would sell or retain buggies; best room in town; good prices, honorable competition. Must sell on account of sickness; very good chance. Address J. M. S., care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 28-3t

Exchange—My 160 acres of good cultivated land near Gettysburg, N. D., and one eight room new dwelling and one new five room house bringing good rent, located here where they are producing oil wells all around, for a stock of hardware, Iowa preferred. Address Box 34, Toledo, Ill. 28-3t

Help Wanted—Thoroughly experienced stove and hardware salesman as clerk in my store. Must be willing worker and good stock keeper. State number of years' experience, age, married or single, references, wages desired and firms from whom goods are bought. Address Frank Lahr, 1032 O St., Lincoln, Neb. 28-1t

For Sale—Nice clean stock of hardware and implements in one of the best towns in northern Indiana; population 1,500. Stock will invoice $4,000; this is a snap for party who wants a good business. Address J. M. X., care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 27-4t

For Sale—A good clean stock of hardware, stoves, tinware, queensware and good implements; also tinshop in building. Located in a good farming community in eastern Iowa. Will sell or retain implement business. Good reason for selling. Address No. 1, care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. ufn

For Sale—A good clean stock of hardware, stoves, tinware, queensware and good implements; also tinshop in building. Located in a good farming community in eastern Iowa. Will sell or retain implement business. Good reason for selling. Address No. 1, care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. ufn

For Sale—Stock of hardware, stoves and tinware; tinshop in connection, in good farming country in central Ohio; business has been established for 21 years. Annual sales from $8,000 to $10,000; can be increased. Stock and buildings about $3,500. A good place for wide-awake man; will give some time or part payment if wanted. Address A 25, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago.

For Sale—Stock of hardware and two-story brick building, 22x80 feet, situated in town of 1,000 in East Central Wisconsin; good farming country, dairying, stock raising, potatoes, grain and sugar beets the principal industries; stock invoices about $4,000; if interested it will pay you to investigate. Address W. & J., care THE AMERICAN ARTISAN, Chicago, Ill. ufm

For Sale—A nice clean stock of hardware with tin shop in connection, doing a good business in southern Wisconsin county seat, within a rich farming country. Only two hardware stores in the city; stock of $4,200. This will bear your investigation. Address Lock Box 52, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. ufn

For Sale—Clean stock of hardware, stoves and paints in eastern Nebraska, doing nice profitable business; stock probably will invoice $3,500. Address E. L. J., care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-3t

For Sale—Stock of hardware and farm implements in a country town doing a nice business. Tin shop in connection, clean stock and first-class fixtures. Cash deal only considered; reason for selling poor health of one partner. Address A2, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. ufn

For Sale—Clean stock of hardware located in one of the best towns in northeastern Iowa; population 2,000; stock will invoice about $4,000. We must sell on account of sickness. Address G., care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-3t

Wanted—Present address of E. C. Mayham, a contractor or carpenter, formerly from Superior, Wis. Will give one year's subscription for The American Artisan for the first one sending same. Address, Rix, care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. ufn

For Sale—Right to manufacture in five states a patented sheet metal article of great merit, or will sell patent outright. Dissolution of partnership reason for selling. Address Xint, care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-4t

TINNERS' TOOLS.

For Sale—Tinner, plumbing and furnace business; the only shop in town of 800 population; stock and tools will invoice about $2,000. Call on or address J. C. Loehr, Lone Tree, Iowa. 28-3t

For Sale—Set of tinners' tools, exxcepting square shears; all nearly new; also stock and supplies; $125 takes the whole outfit. Send for list and invoice. Address Tinner, P. O. Box 225, Fairfield, Ill. 28-3t

For Sale—Set of tinners' tools; list furnished upon inquiry. Will sell at a bargain. Address A. N. Patriarche & Co., Battle Creek, Mich. ufn

For Sale—Cheap or exchange for others, lot of second-hand tinsmith's tools and machines in fair condition. For list and particulars address N. B. Case, Box 169, Havre de Grace, Md. ufn

Wanted—8 ft. brake; must be in first-class condition. If possible would like to exchange good 3 ft. brake. State price and condition in first letter. Address R. G. Clum & Son, Lamoni, Iowa. 26-3t

HELP WANTED.

Help Wanted—At once, hardware clerk, must have a reasonable amount of experience, good address and accommodating. Address Snyder & Payne, York, Nebr. 28-3t

Help Wanted—Tinner and furnace man; also some plumbing but don't care to have a man that can wipe joints. Combination man is what I want; steady job and good wages. Address A-28, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. ufn

Help Wanted—Tinners wanted. Address Mohr-Jones Hdw. Co., Racine, Wis. 28-3t

Help Wanted—Foreman, competent and reliable man that understands how to galvanize tubs and pails and can manage help. Give age, experience and salary wanted. Address, Superintendent, Flat 3, 183 14th St., Milwaukee, Wis. 28-3t

Help Wanted—All around tinner and plumber. Address E. A. Wolcott, Algona, Iowa. 28-3t

Help Wanted—A first-class all around tinner, German preferred; must be sober. Address, Geo. A. Bruns, Lake Mills, Wis. ufn

Help Wanted—At once, a first-class tinner, one who understands furnace work and plumbing. Steady work, $2.50 per day. Give experience and references. Address Walter L. Gumm, Remington, Ind. 27-3t

Help Wanted—At once, a good steady, sober tinner and furnace man who can make estimates on and do all kinds of furnace and tin work, slate roofing and steel ceiling work; must be able to figure from plans; must give best of references; state wages in first letter. Address M. Reinhardt's Sons, Lincoln, Ill. 27-3t

Help Wanted—A good all around tinner, one that who can clerk in store when required. A good steady position for the right man. Address J. Meyrs, Bourbon, Ind. 27-3t

Help Wanted—Tinner to take charge of shop, up-to-date on furnace work; also some knowledge of cornice work. Will pay $15.00 per week the year around to man that suits. Best home town in state; good schools. Address Ole Nelson, Mankato, Minn. 27-3t

Help Wanted—Tinner to take charge of shop; married man preferred; temperate and good workman; one that can cut out and put up cornice preferred. Address Geo. A. Brush, 900 Congress Ave., Austin, Texas. 27-3t

Help Wanted—Good tinner and furnace man with some knowledge of plumbing. Wages $2.50 per day; work the year around; only man of good habits need apply. Address C. V. Mashek, Kewaunee, Wis. 27-3t

Help Wanted—Two first-class tinners for inside and outside work. Steady work the entire year to the right men. Address A-27, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-3t

Help Wanted—Five tinners and furnace men of practical experience; state wages desired and number of years' experience; steady work for the right man. Address Eau Claire Cornice and Heating Co., Eau Claire, Wis. 26-3t

Help Wanted—Tinner wanted for general jobbing shop; must be able to do gutter work and understand something of furnace work. Address Geier & Peppler, 700 Lincoln Ave., Chicago. 26-3t

Help Wanted—Good tinner for general work. Address T. B. Bennett & Co., Flanagan, Ill. 26-3t

Help Wanted—Good all around retail hardware man; must be temperate and a worker. Give age, salary wanted and references. Good salary and steady job to right man. No others need apply. Address R. H., care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-3t

Wanted—At once, tinner who understands ordinary plumbing, steam and hot water heating, and clerk in store part of time. Steady job for right man, $15 per week. Address W. F. Rehbein, Gray's Lake, Ill. ufn

Wanted—Cornice makers to assemble and erect. Good wages and steady work to experienced men. Address, The Edwards Manufacturing Co., Cincinnati, O. ufn

Wanted—Conductor pipe machine operator; good wages to experienced man. Address, The Edwards Manufacturing Co., Cincinnati, O. ufn

Wanted—Salesmen calling on hardware trade with first-class reference for the states of Montana, Wyoming, New Mexico, Georgia, Mississippi Louisiana and Arkansas. Best known and fast selling staple liner made. Address X Y Z, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. ufn

Wanted—Cornice workers wanted to put together and erect cornice. Need not be cutters. Address The Edwards Manufacturing Co., Cincinnati, O. ufn

Wanted—Spinners wanted to spin sheet copper and zinc work. Must be reliable. Address, The Edwards Manufacturing Co., Cincinnati, O. ufn

Wanted—At once, a good all around tinner who thoroughly understands inside and outside work, pipe fitting and some plumbing. Steady job for the right man the year around. State wages wanted and references in first letter. Address Rud Puchner, Wittenberg, Wis. ufn

Wanted—First-class salesman, by leading furnace and boiler manufacturer. Only men who have had actual experience in warm air, steam and hot water heating wanted. Prefer men who have sold goods to the trade. Excellent opportunity for the right man. Established trade in territory. Address O. B. J., care THE AMERICAN ARTISAN, Chicago. U. F. N.

SITUATIONS WANTED.

Situation Wanted—By tinner with knowledge of plumbing and furnace heating. Age 35; married, sober, reliable and not afraid of work; will be ready to make a change about Sept. 1st; steady all year job in Wisconsin only considered, 10 hours a day; $18.00 per week. Address L. B. 472, Columbus, Wis. 28-3t

Situation Wanted—Situation by a thoroughly competent plater; also chemist; will improve working methods in plating and polishing; situation as foreman with complete charge with a reliable firm; have had years of experience in handling help. Strictly sober, best of reference, moderate salary. Address E. P. P., care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. ufn

SITUATIONS WANTED.

Situation Wanted—Position by tinner of fifteen years' experience; can handle steam, hot water and warm air heating and can do a good respectable job of plumbing. State your best wages, nothing out a steady job considered; strictly sober. Address A-29, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago, Ill. 28-3t

Situation Wanted—By a practical tinner and furnace man with knowledge of ordinary plumbing. Age 35, married, strictly sober and reliable, wages $3.00 per day every working day of the year; steady job wanted, Wisconsin preferred. Address L. B. 472, Columbus Wis. 28-3t

Situation Wanted—A position as hardware clerk by a young married man of experience. Temperate and capable; understand general office work and can furnish best of references. State wages. Address T. A. Vaughn, 1023 W. Decatur St., Decatur, Ill. 27-3t

Situation Wanted—A tinner with 12 years' experience in hot air, hot water and combination heating, wants steady position with up to date firm; capable of estimating, taking contracts and installing plants. Can furnish best of references as to ability and character. Good reason for wishing a change. State full particulars in first letter. Address A 24, care THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 26-3t

SPECIAL NOTICES.

WANTED

As salesman in Wisconsin, Minnesota, North and South Dakota, a live man with a knowledge of the furnace business. Permanent position at a good salary. Address, U. S. Register Co., Battle Creek, Mich. 5t-30

SALESMEN

Calling on the furnace trade will learn of a profitable, fast selling side line, by addressing, W. J. Sutherland, Drawer W., Battle Creek, Mich. 5t-30

Special Notice.

Wanted—Traveling Salesman. To sell a well known line of stoves and ranges. Men wanted for Ohio and Minnesota, must be competent and know the trade. Good salary. Address H. W., care of THE AMERICAN ARTISAN, Chicago, Ill.

WANTED

Traveling salesmen to sell an up-to-date line of steel ranges on commission. In replying kindly advise what lines you are handling. Big profits for right party. Address Landay Steel Range Co., St. Louis, Mo. 1t

HARDWARE WANTED

Have a good improved farm in Iowa and one in Illinois to exchange for a stock of hardware or hardware and implements. Address with full particulars B-4, care of The American Artisan, 69 Dearborn St., Chicago. 4t5

WANTED

An active salesman to handle a high-class, quick selling line; one acquainted with Hardware House Furnishings and Stove Trade preferred. Address "Opportunity," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 1t.

WANTED—FOREMAN

Man to take charge of our Steel Range Dept. Must be thoroughly competent to handle men and get out patterns. We have a good position open for a first-class man and will pay good salary. Apply to THE WM. RESOR & CO., Cincinnati, O. 3t-5

WANTED

Side Line: Salesman calling on heating trade regularly, to sell registers—commission basis. State territory covered, and how often; can make confidential or secret arrangements with good men. Address, SALES MANAGER, 2488 W. 27th St., Cleveland, Ohio. u. f. n.

WANTED

Wood Pattern Makers on Stove-work. Address "Pattern Maker," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago, Ill. u. f. n.

SITUATION WANTED

Experienced traveling salesman with a No. 1 Chicago and New York City references wants permanent position with enameled ware or stove manufacturer. Can sell any good specialty, salary and expenses or salary, expenses and commission. Indiana, Illinois or the East preferred. Would go to the Coast. Address "B2," care of THE AMERICAN ARTISAN, 69 Dearborn St., Chicago. 4t-29

WANTED

A live commission man to handle, in New England States, one of the largest and most complete lines of furnaces and boilers made in this country—a line that is well known in all parts of the United States. Address "Manufacturer," care of THE AMERICAN ARTISAN, 69 Dearborn Street, Chicago.

Capital Wanted

Am going to establish a Stove Repair business in Chicago, selling dealers ORIGINAL Stove Repairs furnished by stove manufacturers. Have had years of experience in Stove Repair business, and see good opening to furnish repairs from original patterns—a good chance for immediate returns on capital invested; references furnished. Address "Capital," care of The American Artisan, Chicago. 5t-26

WANTED

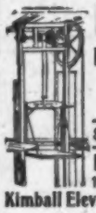
Tinners, sheetmetal, cornice and skylight workers; open shop; good wages, minimum 35c per hour. Apply Metal Workers' Association, Builders' Exchange, Buffalo, N. Y. u.f.n.

FOR SALE

USED MACHINERY—One lot shears 3' to 8' in length, both hand and power. One lot light and heavy sheet iron rolls. Also lever punches and shears. BERTSCH & CO., Cambridge, Ind. u. f. n.

WANTED

Young man, good at figures and a plain writer, who is familiar with the different parts of a stove, to work in stock room of a Stove Repair House. Address "B-3," care of AMERICAN ARTISAN, 69 Dearborn Street, Chicago. u. f. n.



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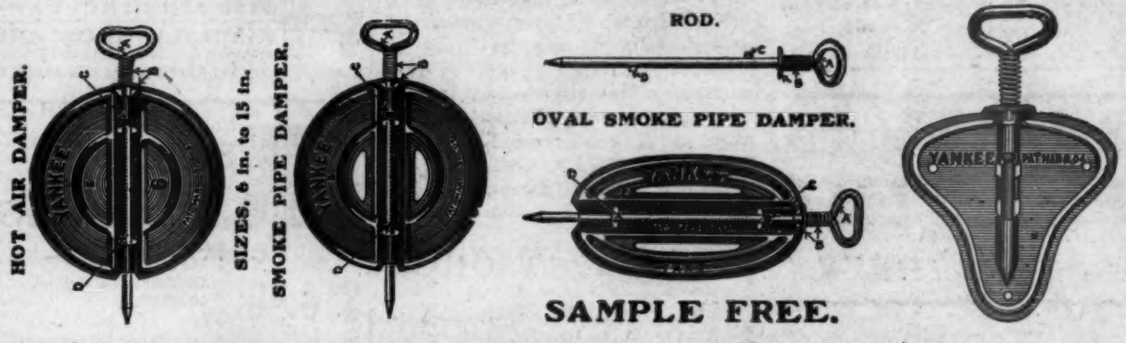

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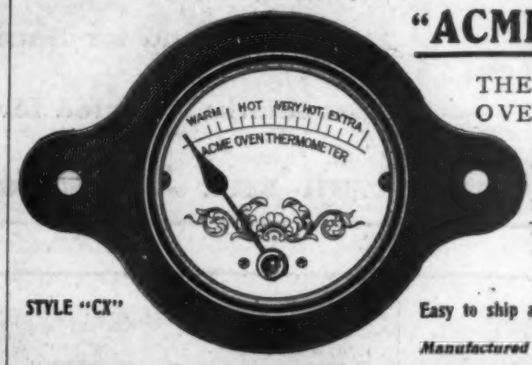

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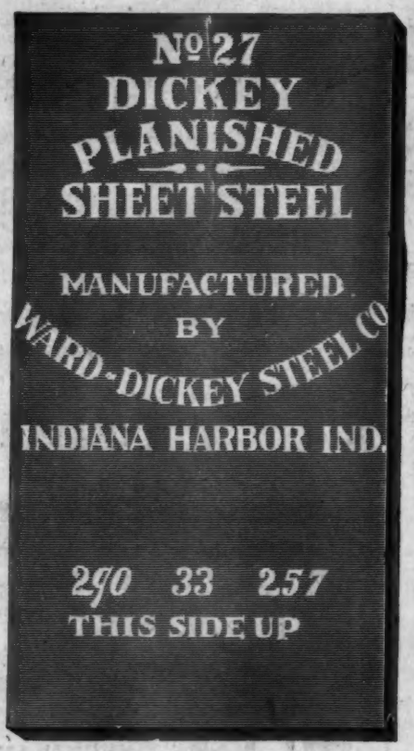

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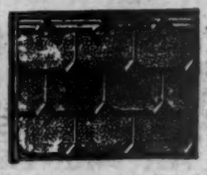

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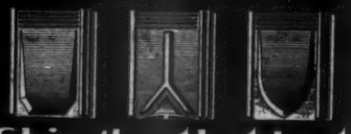

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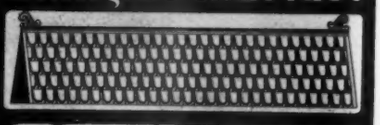

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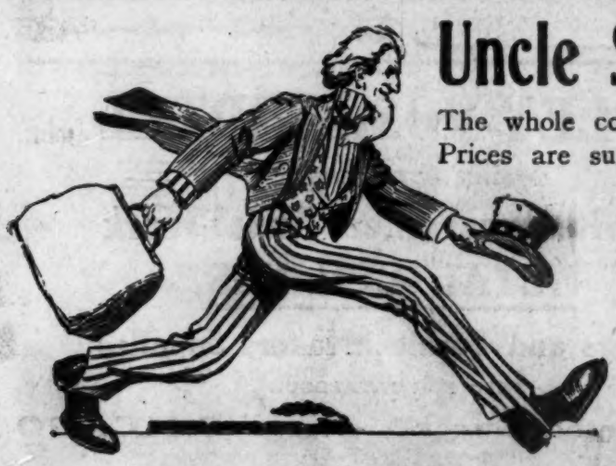

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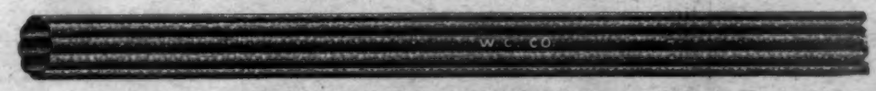

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One-Piece Miter

The Improved One-Piece Miter

Not an imitation, neither a mere attempt, but a real full shape standard size MITER. Made of the very best material, sold at the lowest possible price.

Accept nothing but WHITACRE'S ONE-PIECE MITER.

The Leader Cutoff

"Leader" Cut-off.

Leads them all, takes the flow direct to the cistern or sewer unless cut out, thus the conductor pipe is kept in line below the cutoff with same above, giving a neater and more workmanship appearance.

Has a positive valve and simple fastening. Packed half right and half left hand in one dozen crates.

Nothing as good as the LEADER.

"King Strainer"

The King Strainer

King of them all because it can be used in any position on the pipe above or below the cutoff, allowing any combination desired at a reasonable cost. The proper place for the KING is at the outlet of the gutter or trough, thus allowing all foreign matter to be discharged instead of clogging up the gutter or conductor pipe. The birds cannot nest in the elbow with this strainer, has large opening allowing leaves, sticks, etc., to discharge without clogging. Try a few dozen and note the results, a satisfied customer a valuable asset.

Three Times and out, the three above will put all others out.

J. E. WHITACRE MANUFACTURING CO.

Manufacturers of Specialties Dept. A. Rockford, Ill.

TOOLS FOR SHEET METALS

BUFFALO SNIPS.

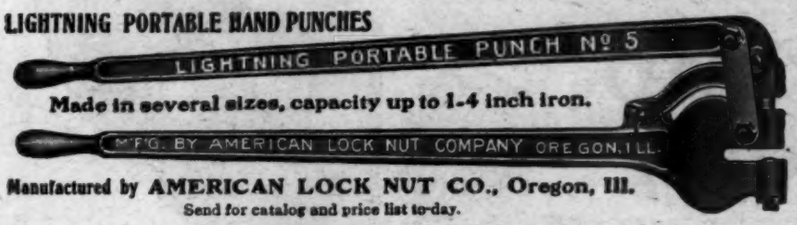
INCLUDING

Tinners' and Roofers' Tools, Shears, Punches, Presses and Dies. Can-making Machinery

MADE BY

NIAGARA MACHINE & TOOL WORKS, Buffalo, N. Y.

LIGHTNING PORTABLE HAND PUNCHES



Made in several sizes, capacity up to 1-4 inch iron.

Manufactured by AMERICAN LOCK NUT CO., Oregon, Ill.

Send for catalog and price list to-day.

BEATS THEM ALL

Punches holes easier than any machine of same capacity.

Send for Catalogue and Price List

AJAX PORTABLE HAND PUNCHING MACHINE CO.,
1489 MONTICELLO AVENUE, CHICAGO

MEDAL AWARDED, WORLD'S FAIR, ST. LOUIS

The O. K. Steel Brake. Patented March 28, 1901.

W. J. Burton Co., Detroit, Mich.
H. Weiss & Co., 20 Cliff St., New York, N. Y.
Janney, Semple, Hill & Co., Minneapolis, Minn.
C. Sidney Shepard & Co., St. Louis, Mo., etc.
Illinois Roofing & Supply Co., Chicago, Ill.
J. M. & L. A. Osborne Co., Cleveland, O.
Laskey Rogers Co., Toledo, O.
Holbrook, Merrill & Stetson, San Francisco and Los Angeles, Cal.

Will not warp like wood.

DREIS & KRUMP, Mfrs., 3214 S. Halsted St., Chicago

THE WATER WAY

BETWEEN

DETROIT AND BUFFALO

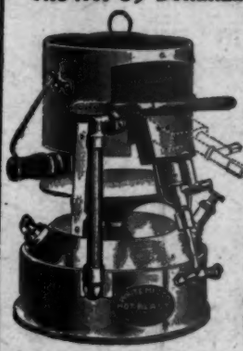
The D. & B. Line Steamers leave Detroit weekdays at 5:00 p.m., Sundays at 4:00 p. m. (central time) and from Buffalo daily at 5:30 p. m. (eastern time) reaching their destination the next morning. Direct connections with early morning trains. Lowest rates and superior service to all points east. Popular week end excursions to Buffalo and Niagara Falls leave Detroit every Saturday and return Monday morning.

RAIL TICKETS AVAILABLE ON STEAMERS

All classes of tickets sold reading via Michigan Central, Wabash and Grand Trunk railways between Detroit and Buffalo in either direction will be accepted for transportation on D. & B. Line Steamers. Send 2c. stamp for illustrated pamphlet. Address: **A. A. SCHANTZ, Gen. Supt. & P. T. M.**

DETROIT & BUFFALO STEAMBOAT CO., DETROIT, MICH.

Hottest On Earth.
The No. 39 Bonanza Furnace



That is what we give you when buying a No. 39 Furnace for all around work. The tank is made of seamless drawn brass. We make many styles of Furnaces and Torches for kerosene as well as gasoline. Our catalog will give you full particulars. Order through any jobber, or send us $4.50; we will ship direct.

THE TURNER BRASS WORKS,
26 No. Franklin Street, - Chicago

Prove It Yourself!

No. 1 Fire Pot
$6.00 Net

We say to you that the No. 1 Fire Pot is better made and more durable than other makes; that it will enable the user to do more and better work, using less gasoline, thus saving time and money (**You pay good money for time and gasoline**); that it has many advantages not found in other makes. Try one. You run no risk in doing so. "Your money back if you are not pleased." Jobbers sell at factory price.

Clayton & Lambert Mfg. Co.,
Detroit, Mich., U. S. A.

8-foot Shear

We build a complete line of Shears, Punches and Forming Rolls, for either hand or belt power.
BERTSCH & CO., Cambridge City, Ind.

Bolt and Screw Cases

SAVE TIME and MONEY

A necessity for Hardware Dealers, Machine Shops, Pattern Shops and in fact anyone who handles small articles—last indefinitely. Send for descriptive booklet.

AMERICAN BOLT & SCREW CASE CO.
Dayton, Ohio, U. S. A.

Blick No. 3 The Best Box
FOR RURAL FREE DELIVERY

$5.88 Per Dozen

BE JUST WITH CUSTOMERS

Sell them Blick No. 3 boxes. They are big ones, 6½x8½x 19 inches. Made of heavy galvanized steel. Painted green, the new Government color. Same shape and color as city boxes. Have Positive-Locking Flag Signal, Automatic Latch, Water-Tight Quality. Every box tested, every box right, every box warranted. They will get the business. You better get them. Order now.

$5.88 per Doz.

BLICK-WILLIAMS CO.
INDIANAPOLIS, IND.

THE 20TH CENTURY MAIL BOX

Constructed of No. 20 **Galvanized Steel** and **will not rust or break.**

Is fitted with spring lock and two keys; also heavy glass panel and brass clip within for owner's name. Two springs - outside to hold papers. Slot has spring-hinged cover, making it **absolutely rain-proof.** Painted with best aluminum bronze, like U. S. mail boxes. Size, inside 10 x 5½ x 2¾ inches.

Used for free delivery in cities only.

HEISE & BRAUER
63 Union Park Ct., Chicago, Ill.

No Dust, No Dirt

Pleases everybody

Quick Seller

Order at once to insure prompt delivery.

Send for prices.

HILL DRYER CO.
Worcester, Mass., U. S. A.

C. De Witt Wagner, 407 Third Ave., Cedar Rapids, Ia., writes: "Please accept my thanks for your help in securing a tinner for me. I had letters from several states which goes to show that The Artisan is read."

MAKE MORE MONEY

Rural Routes are going in all around you. You can get this business with the **SIGNAL MAIL BOX**

It is the original box for Rural Routes with special endorsements of Postmaster General. • The best made, the best liked, the easiest sold and the best advertised.

SIGNAL MAIL BOX CO.
106 Benton St., Joliet, Illinois

Planet R. F. D. Mail Box

with patented Automatic Flag Signal. Made of 20 gauge galvanized steel. Each box warranted. $5.40 per dozen.

Sanitary Adjustable Strainer Pail

IX Charcoal Tin

12 qt. $4.50

14 qt. 5.00

Jobbers Sell at Factory Prices. Ask Them.

SMITH BROS. MFG. CO.
246-254 E. Kinzie St., CHICAGO, ILL.
Also at INDIANAPOLIS, IND.

The LENOX HOTEL IN BUFFALO

Modern. Highest Grade. Fireproof.

OUR OWN ELECTRIC CARRIAGES, EXCLUSIVELY FOR PATRONS, operate between the Hotel, Depots, Wharves & Business District every few minutes.

EUROPEAN PLAN

Rates $1.50 per day and upward.

GEORGE DUCHSCHERER, Proprietor.

BRISCOE MANUFACTURING COMPANY

O-RIB-O WARE

DETROIT, MICH.

HIGH GRADE

Reversible Hog Scraper

BEST STAMPED STEEL GALVANIZED WITH HARD WOOD HANDLE.

For Quick Work on the Sides the large end is used.

In the Folds of the Skin, and about the Head, Ears and Legs use the small end.

No. 206. List per gross, $33.
Write for Trade Discount.

SMITH & HEMENWAY CO.
Mfrs. of Cutlery and Hardware Specialties
108-110 Duane St., New York

Clipper Lawn Mower Co., Dixon, Ill.

Manufacturers of Hand and Pony Mowers, also Marine Gasoline Engines from 2 to 8 horse power.

THE MOWER That will kill all the weeds in your lawns.

If you keep the weeds cut so they do not go to seed, and cut your grass without breaking the small feeders or roots, the grass will become thick and the weeds will disappear. The Clipper will do it. If you wish Clippers, send in your orders.

Steel Hardware Shelf Boxes

Screw Cases, Etc.

Send for Circulars.

Heller Co., MONTPELIER, OHIO.

C. N. HOOPER, Dubuque, Iowa.

VITREOUS ENAMELING TECHNOLOGIST

Designs, builds and starts new plants. Improves quality and reduces the costs in those already established.

STEWART IRON FENCE

Agents Wanted

Hardware Dealers Make Big Profits Selling Stewarts FAMOUS IRON FENCE

For Residences, Churches, School Houses, Etc.

Cemetery Lot Enclosures a Specialty

Artistic Entrance Gates

Park & Cemetery Arches

Iron Reservoir Vases, Lawn Settees, Iron Tree Guards, Hitch Posts, Fountains, Etc.

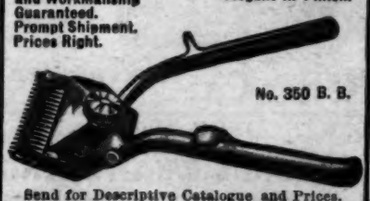
WRITE FOR CATALOGUE No. 23 TO-DAY

THE STEWART IRON WORKS COMP'Y
CINCINNATI, OHIO, U. S. A.

HOTCHKISS CLIPPERS

Standard Quality and Workmanship Guaranteed. Prompt Shipment. Prices Right.

Simple in Design. Elegant in Finish.



No. 350 B. B.

Send for Descriptive Catalogue and Prices.

EDWARD S. HOTCHKISS,
IRANISTAN AVE., BRIDGEPORT, CONN.

Gillette Safety Razor

NO HONING NO STROPPING

The Most Wonderful Selling Razor in the World

IT PLEASES EVERY PATRON, WHO, IN TURN, BRINGS A NEW CUSTOMER.

"THE GILLETTE" sales are permanent, it turns orders to money and profits.

"THE GILLETTE" blade is of fine, flexible, wafer steel that shaves. 20 to 40 quick and comfortable shaves from each blade.

12 Blades 24 Keen Edges

Triple silver-plated set with 12 blades,	$ 5.00
Quadruple gold-plated set with 12 blades,	10.00
Quadruple gold-plated set with 12 blades and monogram,	12.00
Standard combination set with shaving brush and soap in triple silver-plated holders,	7.50
Other combination sets in silver and gold up to	50.00

Standard packages of 10 blades with 20 sharp edges, for sale by all dealers, at the uniform price of 50 cents.

No Blades Exchanged or Resharpened

We supply our dealers liberally with signs, booklets and hangers. Write for our uniform discounts and facts.

GILLETTE SALES COMPANY
TIMES BLDG., NEW YORK CITY

U. S. CLOTHES PINS

never rust, smut, split, or blow off the line.

Any special clips made to order.

U. S. CLOTHES PIN COMPANY,
MONTPELIER, VT., U. S. A.

SPERRY'S CALDRONS

Full measure, guaranteed perfect original patterns, with metal distributed where it is needed. Many Caldrons are made from our casting as patterns. They are inferior to originals, as they have light bottoms and heavy sides and hold less.

Twelve sizes always in stock.

D. R. SPERRY & CO. HOLLOW-WARE FOUNDERS **Batavia, Ill.**

SYMCO TRADE MARK

FOR GOOD BUSINESS REASONS

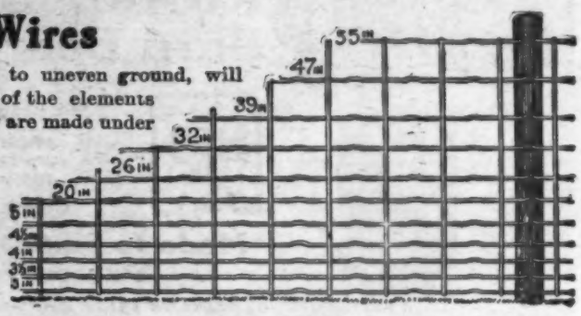
You ought to investigate our line of High Grade Oars, perfectly uniform in design, quality and finish made from select stock in either spruce or ash, plain or copper tipped.

Write us for Prices, Terms, Etc.

STRAND-YOUNGQUIST MFG. CO., (Inc.) 2902 Clinton Av., Minneapolis, Minn.

"Pittsburgh Perfect" Fences

All Galvanized Steel Wires



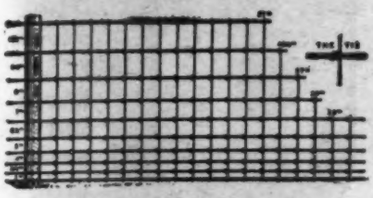
Are durable, strong and adjustable. They can be adjusted to uneven ground, will curb in the strongest beast and will withstand the attacks of the elements longer and surer than any other fence on the market. They are made under the same favorable conditions and as carefully as all the

"Pittsburgh Perfect" Brands

of Wire Rods, Annealed, Bright and Galvanized Smooth Wire, Barb Wire, Twisted Cable Wire, Fence Staples, Wire Nails, Steel Hoops, Bands and Cotton Ties. Dealers can sell goods readily which are MANUFACTURED BY

The Pittsburgh Steel Co., Pittsburgh, Pa.

The Fence That Suits



Your Customer

Is the one for you to handle

Woven Field Fencing

Both Single and Double Strand.

JUMBO POULTRY turns everything.
Lighter Poultry for less money of Various Weights.

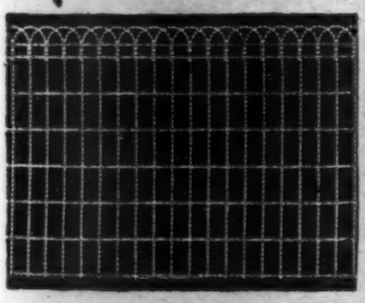
Lawn and Cemetery Fence, Barb Wire, etc.

SEND FOR CATALOGUE.

THE DENNING WIRE & FENCE CO.

CEDAR RAPIDS, - IOWA

"Fences that Sell"



This is a good one; we have others.
Many dealers handling.
We want more.

We also manufacture Field Fence, Wire Gates.

CYCLONE FENCE CO.

Dept. 10 Waukegan, Ill.

HIGH-GRADE BUGGIES

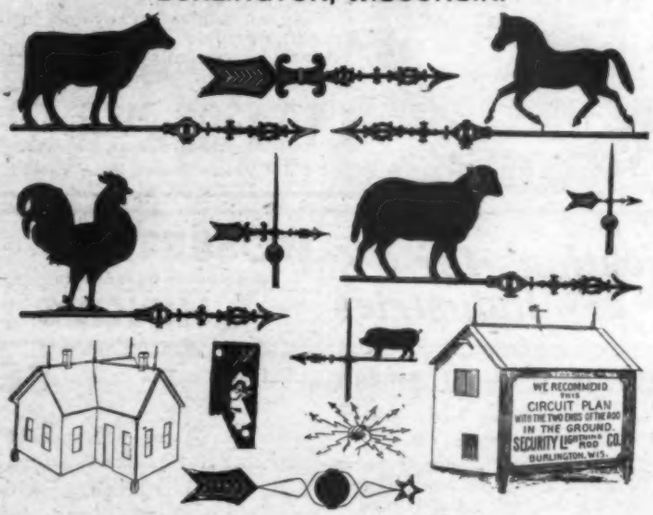
$47.50 AND UP. Dealers Only.

Strictly First-Class Material

JAMES & MEYER BUGGY CO.
Write for Catalog and Price Lawrenceburg, Ind.

FROM
THE SECURITY LIGHTNING ROD CO.

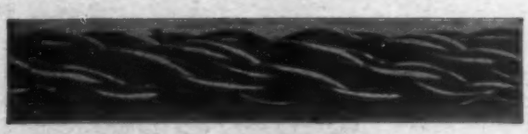
BURLINGTON, WISCONSIN.



Send for Catalogue and Price List to

The Security Lightning Rod Co.

LIGHTNING RODS ARE A PROTECTION



when you use our

Pure Copper Cable

If it wasn't why do we give a $500.00 guarantee. We have got the best and heaviest Cable and Fixtures on the market, and our prices are far below any other firm now making an inferior cable. There is money in the business for you.

We want an agency in every county, send for catalog and prices to

MAHER & SON, Preston, Ia. The firm that cut down the price of Lightning Rods.

We have a Hardware Delivery Wagon that you can Depend Upon.

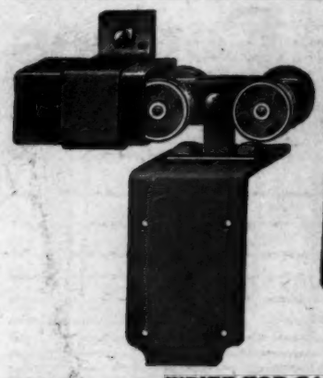
Body 20 in. from the ground; full width; regular heighth wheels, and yet will turn short.

Easy to Load and Unload.

Durability guaranteed.
Complete catalogue on request.
Mention this paper and address in full.

SYCAMORE WAGON WORKS

109 Edwards Street SYCAMORE, ILL.



Richards Trolley Roller Bearing Barn Door Hanger

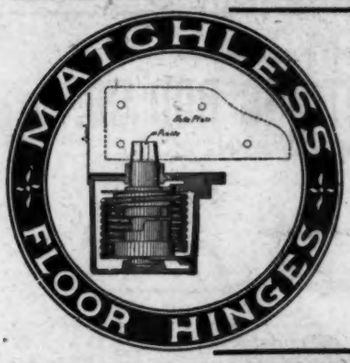
The Best Trade Winner on the Market

SPARROW PROOF
WATER PROOF
JUMP PROOF
Lateral Adjustment

Made to Suit Door of Any Size or Weight

WRITE FOR CATALOG OF DOOR HANGERS

The Richards Manufacturing Co., AURORA, ILLINOIS.



The Sincerest Flattery for the "Matchless" is the imitations which are to be found in the market.

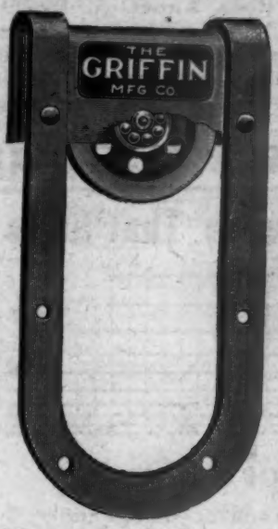
The Matchless double-acting floor spring hinge is ball bearing. This insures a minimum of friction. The matchless operates easy and without noise.

They can be fitted to any door in Bank, Church, Vestibule or Pantry,

Send for our fully illustrated catalog and price list. Address Dept. A,

LAWSON MFG. CO.,
40 Dearborn Street, Chicago.
101 Reade Street, New York.

GRIFFIN'S IMPROVED STEEL DOOR HANGERS



Hard Steel Axles

Roller Bearings

Entirely Anti-Friction

Frames Wrought Steel

Wheels Semi-Steel

Strap and T Hinges
Folding Shelf Brackets
Barn Door Track
Wrought Steel Butts

GET OUR COMPLETE CATALOG

GRIFFIN MFG. CO.
ERIE, PA.

Locations for Industries

ON

THE ERIE, THE COMMERCIAL RAILROAD

Chicago to New York

The Erie Railroad System's Industrial Department has all the territory traversed by the railroad districted in relation to resources, markets and advantages for manufacturing, can advise with manufacturers of specific products as to suitable locations, and furnish them with current information of a comprehensive nature dealing with the project in its full relation to manufacture and commerce.

The Erie is one of the greatest of trunk lines. Its own rails connect the two largest cities of America. Every section of the System has its particular merits. Profitable locations exist. It has great general and coal, oil and natural gas resources.

It is important in this age of modern facilities for manufacturers to locate where they can obtain side tracks so as to receive from and ship directly into cars at the factory. Information can be promptly furnished in this connection about every point on the system between New York and Chicago.

Manufacturers' inquiries as to locations are treated in strict confidence, and absolutely reliable information, so as to promote permanent traffic, is furnished. Address

LUIS JACKSON
Industrial Commissioner
Erie Railroad Company.
11 Broadway, New York.

L. D. McQUISTON & CO., Monticello, Ark., write: "You may discontinue our want advertisement as it has already brought about the required results."

GOSSETT

Detachable Suspension

HINGES

(For full length screens)

SELL

ONE REASON: Carpenters and Builders prefer them. Every mail brings inquirings—which are referred to the hardware dealer.

Are you prepared to take care of these?

A card will bring a sample pair.

F. D. Kees Mfg. Co.
(Desk A)
Beatrice, Nebraska

SOLD BY MANY HARDWARE JOBBERS.

MANUFACTURERS

Contemplating establishing plants in the West should take advantage of a location on

THE NORTH WESTERN LINE
C. & N. W. R'Y.

Chicago & North-Western Ry.

WHICH REACHES THE FAMOUS
Water Powers, Coal Fields, Iron Ore Ranges, Hard & Soft Lumber Districts

of the West and Northwest, and affords the best means of transportation to the markets of the world. For further particulars apply to

MARVIN HUGHITT, Jr. Freight Traffic Mgr.
E. D. BRIGHAM, Gen. Freight Agt.
CHICAGO.

Yale Locks

The need of locks may not be a credit to civilization but a Yale lock is a credit to him who uses it and to him *who sells it.*

The genuine Yale lock always has the trade mark

YALE

on the cylinder as shown above. That name is a guarantee of quality in material and workmanship as well as of the latest ideas in lock construction.

Hardware dealers should write for our No. 18 Catalog which lists our more active goods.

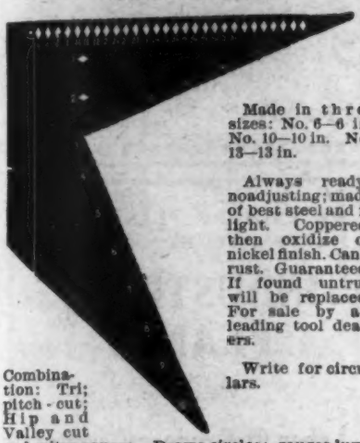
Yale & Towne Mfg. Co.
9 Murray St., New York
Chicago Office: 90 Lake Street

THE AMERICAN ARTISAN Ads Bring Results.

Goodell-Pratt Company
GREENFIELD, MASS., U. S. A.
Catalogue Free
HACK SAWS
FAMOUS FOR TEMPER AND CUT
HAND AND MACHINE BLADES OF ALL STANDARD LENGTHS AND WEIGHTS.

The New Universal Square

"NEW STYLE"



Made in three sizes: No. 6—6 in. No. 10—10 in. No. 13—13 in.

Always ready; noadjusting; made of best steel and is light. Coppered, then oxidize or nickel finish. Can't rust. Guaranteed. If found untrue will be replaced. For sale by all leading tool dealers.

Write for circulars.

Combination: Tri; pitch-cut; Hip and Valley cut and mitre square. Draws circles; gauges lumber; octagonal cuts; laying out mortise and tenons; plumb and level; straight edge; rule scale; and innumerable other purposes. To operate you simply reverse it from side to side. It marks ½-in on one side and ¼ in. on the other.

THE DUBY & SHINN MFG. CO., Inc.
Office and Works: 34 E. 29th St.
NEW YORK CITY

THE
"BIG FOUR ROUTE"

passes through an interesting Country every mile of the way

CHICAGO TO
INDIANAPOLIS
CINCINNATI
LOUISVILLE
and all points
SOUTH
AND
SOUTHEAST

Buffet Parlor Cars or Dining Cars on day trains, and Pullman's finest Compartment and Standard Sleepers on night trains. All trains run solid, Chicago to Cincinnati. The only line from Chicago connecting in the Central Union Depot, Cincinnati, with C. & O., Q. & C., L. & N. and B. & O. S. W. Rys. For reservations, etc., call on or address

I. P. SPINING, G. N. A.
238 Clark Street - - - CHICAGO

HOME BENCHES

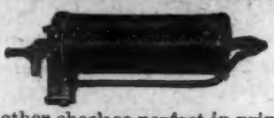
The No. 42 Bench; also made without Cabinet

WRITE FOR CATALOG AND PRICES

GRAND RAPIDS HAND SCREW CO.
160 South Ionia Street, GRAND RAPIDS, MICH.

Largest Manufacturers of Manual Training and Home Benches in the World.

FOURTH SEASON OF "PULLMAN" SCREEN DOOR CHECK



No other check so perfect in principle and material, or so satisfactory as to working and wearing qualities. Polished Brass Cylinder; all the remainder cold steel.

SEND FOR NEW CATALOG.
PULLMAN MFG. COMPANY, Rochester, N. Y., U.S.A

Chas. Lusted, Sr., La Fayette, Iowa, writes: "THE AMERICAN ARTISAN is the inventor's friend."

Try Square No. 5—6-inch only. Note the Gauge edge.

Fox's N. P. All Steel Tools

CARRIED BY ALL JOBBERS.
Popular priced but accurate.

No. 3 Try and Miter Square, 10 inches only.

On this line: No. 2 Miter Square 4½-in., 6-in., 8-in.

No. 5, $4.00 Each

We are producing this Level to give users all the advantages of a full brass bound level at a nominal price. The stock is very choice selected cherry, corners are heavy, tips cast, and especially hard, to stand wear.

A beautiful Level, polished and strictly first class. Packed one in a box, and six in a case. Any dealer can handle a case very quickly. Write for discount.

THE BAKER-McMILLEN CO., AKRON, OHIO, U. S. A.

Stanley Rule and Level Co.

IMPROVED CARPENTERS' TOOLS

Sold by All Hardware Dealers. NEW BRITAIN, CONN.

YOU CAN GET THE PAINT BUSINESS OF YOUR TOWN **By Selling**

ESTABLISHED 1861. THE H&M PAINTS TRADE MARK ADOPTED 1906.

Every Can Contains Satisfaction for Your Customers and Profit for You.
Exclusive Agency Proposition and complete line of color cards sent on request, if we have no agency in your city. Write——NOW.

Heath & Milligan Mfg Co

Paint and Color Makers, CHICAGO, U. S. A.

"Put a Little SUNSHINE in Your Home."

Do you want to increase your business on White Lead?

Do you want to sell a White Lead which is not advertised by any Catalogue or Mail Order House?

Do you want to sell a White Lead that is BETTER than Strictly Pure White Lead?

Do you want to sell a White Lead which is put up in Steel Kegs?

Do you want to be the only dealer in your city to handle an article of this kind?

If so, write at once to

Enterprise Paint Mfg. Co.

Van Buren and Peoria Streets, Chicago

WE PREPARE PLANS, ESTIMATES AND REPORTS FOR

INDUSTRIAL PLANTS

We reduce

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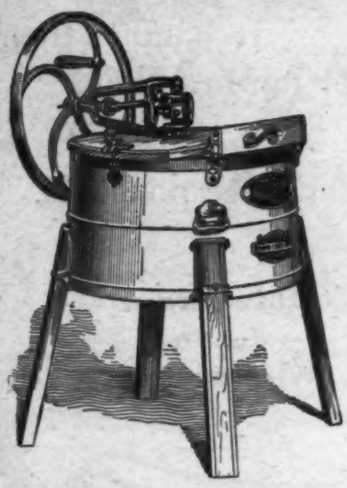

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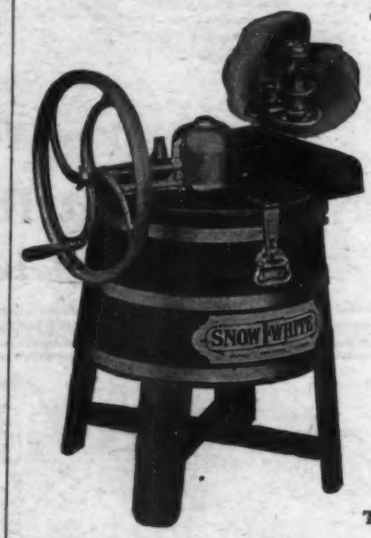

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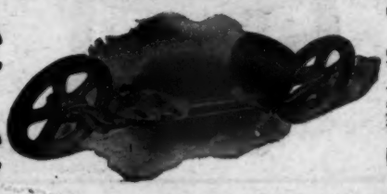

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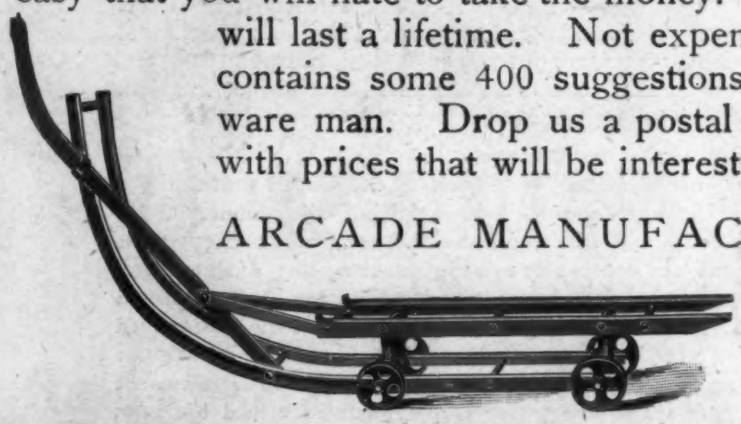

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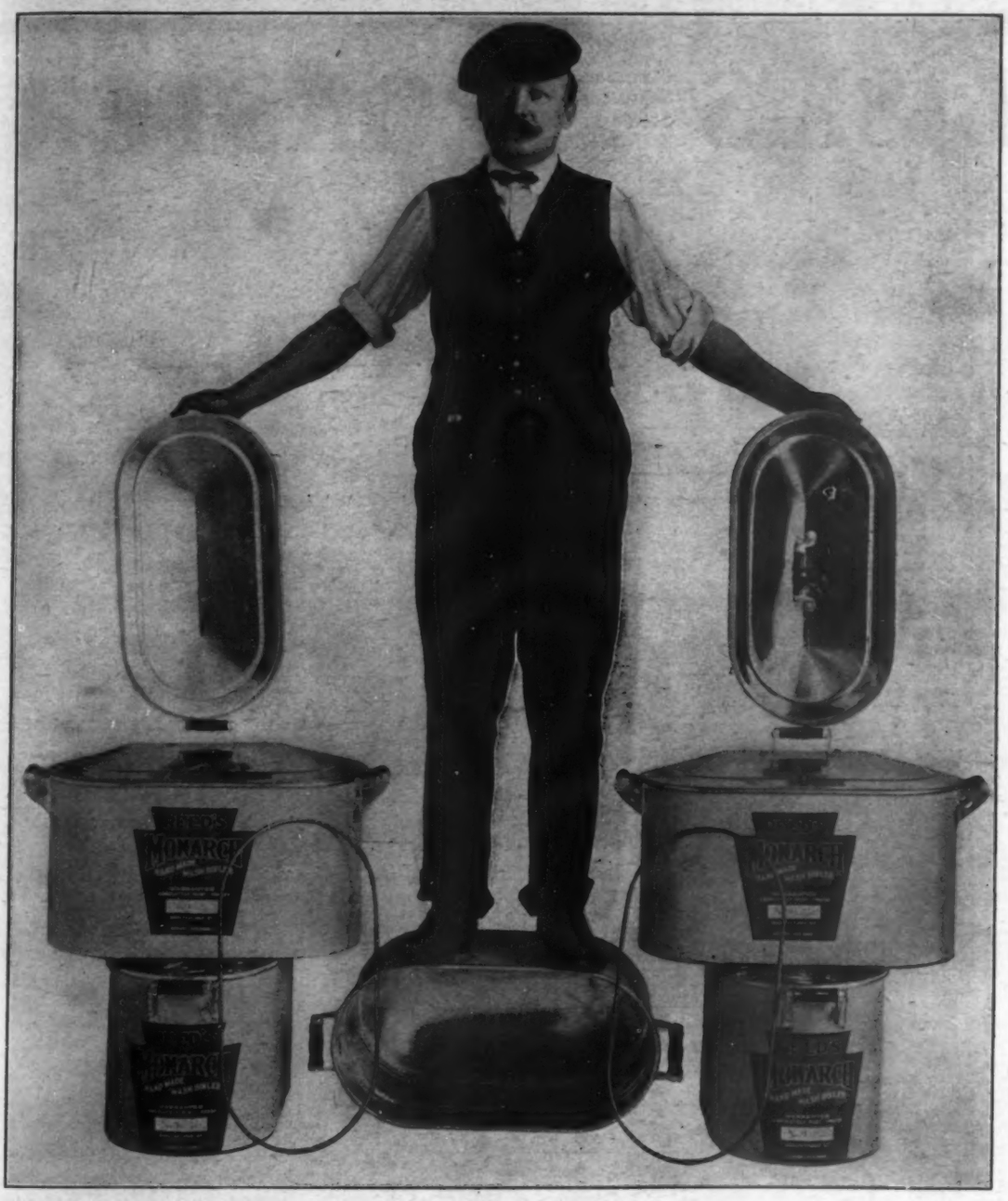

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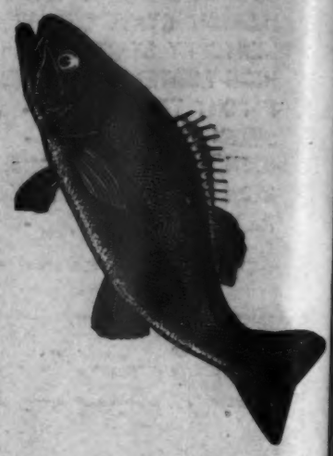

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